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OFFICIAL YEAR BOOK OF THE COMMONWEALTH OF AUSTRALIA.

20

Official Year Book of the Commonwealth of Australia

Australia.

COMMONWEALTH BUREAU OF CENSUS AND STATISTICS,
CANBERRA.

HA
3001
B5
no. 21
1928

OFFICIAL

YEAR BOOK

OF THE

COMMONWEALTH OF AUSTRALIA

No. 21.—1928.

Prepared under Instructions from
The Minister of State for Home and Territories,

BY

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COMMONWEALTH STATISTICIAN AND ACTUARY.

Editor: JOHN STONHAM, M.A.

28 Oct 69

BY AUTHORITY:
H. J. GREEN, GOVERNMENT PRINTER, MELBOURNE.

C.S. No. 523]. —C.6034.—A 2

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PREFACE.

By the Constitution of the Commonwealth of Australia, the Parliament of the Commonwealth is empowered "to make laws for the peace, order, and good government of the Commonwealth, with respect to Census and Statistics." In the exercise of the power so conferred, a "Census and Statistics Act" was passed in 1905, and in the year following the "Commonwealth Bureau of Census and Statistics" was created. The first Official Year Book was published early in 1908. The publication here presented is the twenty-first Official Year Book issued under the authority of the Commonwealth Government.

The synopsis on pp. VII. to XXII. immediately following shows the general arrangement of the work. In addition to the ordinary Chapters, each issue contains special articles dealing with some particular subject or subjects of more or less permanent interest. These cannot of course be repeated year after year, but in some instances a brief condensation is given in subsequent issues. While portion of the matter contained in Year Books Nos. 1 to 20 has been reduced to synopses or deleted in the present issue, the special index provided at the end of the volume will assist in tracing it in previous issues.

The present issue contains a specially-contributed article, dealing with the "Private Wealth of Australia, 1925," placed at the end of Chapter VIII., "Finance."

Amongst the new matter contained in the various Chapters, mention may be made of the sub-sections dealing with the "Financial Agreement," in Chapter VIII. "Finance"; the "International Comparison of Real Wages"; the "Basic Wage"; and "Child Endowment in Australia" in Chapter XIII., "Labour, Wages and Prices"; "Wool Realization Scheme" in Chapter XVI., "Pastoral Production"; while a new Bibliography appears in Chapter XXVI., "Miscellaneous."

The full text of the Commonwealth Constitution Act and Amendments appears on pages 17 to 34.

Recent information or returns which have come to hand since the various Chapters were sent to press will be found in the Appendix, p. 1018.

The material contained in each issue is always carefully examined, but it would be idle to hope that all error has been avoided. The Commonwealth Statistician desires to express appreciation of the opportunity afforded him of improving the Year Book, by those who have been kind enough to point out defects or make suggestions.

My best thanks are due to the State Statisticians, to the responsible officers of the various Commonwealth and State Departments, and to others, who have kindly, and often at considerable trouble, supplied information for this issue.

I wish to express my keen appreciation of the valuable work performed by Mr. J. Stonham, M.A., the editor of the Year Book, and by Mr. H. J. Exley, M.A., who capably filled the position of acting-editor during a period of three months' absence on sick leave by Mr. Stonham. I also appreciate highly the services rendered by the officers in charge of the various branches of the Commonwealth Bureau of Census and Statistics, upon whom has devolved the duty of revising, or in some cases of re-writing, the Chapters relative to their respective branches.

CHAS. H. WICKENS,
Commonwealth Statistician and Actuary.

COMMONWEALTH BUREAU OF CENSUS AND STATISTICS,
Canberra, 20th December, 1928.

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STATISTICAL SUMMARY.

STATISTICAL SUMMARY, AUSTRALIA, 1871 TO 1927.

Heading.		Years. 1871.	1881.	1891.	1901.	1911.	1921.	1926–27.
Population ..	Males	928,918	1,247,059	1,736,617	2,004,836	2,382,232	2,798,727	(*f*) 3,189,823
	Females	771,970	1,059,677	1,504,368	1,820,077	2,191,554	2,710,346	(*f*) 3,045,031
	Total	1,700,888	2,306,736	3,240,985	3,824,913	4,573,786	5,509,073	(*f*) 6,234,854
Births ..	No.	63,625	80,004	110,187	102,945	122,193	136,198	(*f*) 133,698
	Rate	38.00	35.26	34.47	27.16	27.21	24.95	(*f*) 21.67
Deaths ..	No.	22,175	33,327	47,430	46,330	47,869	54,076	(*f*) 58,282
	Rate	13.24	14.69	14.84	12.22	10.66	9.91	(*f*) 9.45
Marriages ..	No.	11,623	17,244	23,862	27,753	39,482	46,869	(*f*) 49,033
	Rate	6.94	7.60	7.47	7.32	8.79	8.59	(*f*) 7.95
Agriculture—								
Wheat ..	Area, acs.	1,279,778	3,002,064	3,335,528	5,115,965	7,427,834	9,719,042	11,687,919
	Yld., bshl.	11,917,741	21,443,862	25,675,265	38,561,619	71,636,347	129,088,806	160,761,886
	Av. ,,	9.31	7.16	7.70	7.54	9.64	13.28	13.75
Oats ..	Area, acs.	225,492	194,816	246,129	461,430	616,794	733,406	844,114
	Yld., bshl.	4,251,630	4,795,897	5,726,256	9,789,854	9,561,833	12,147,433	12,571,203
	Av. ,,	18.85	24.62	23.27	21.22	15.50	16.56	14.89
Barley ..	Area, acs.	48.164	75,864	68,068	74,511	116.466	298,910	370,943
	Yld., bshl.	726,158	1,353,380	1,178,560	1,519,819	2,056,836	6,085,685	6,930,953
	Av. ,,	15.08	17.84	17.31	20.40	17.66	20.36	18.68
Maize ..	Area, acs.	142.078	165,777	284,428	294,849	340.065	305,186	286,178
	Yld., bshl.	4,576,635	5,726,266	9,261,922	7,034,786	8,939,855	7,840,438	6,970,273
	Av. ,,	32.21	34.54	32.56	23.86	26.29	25.69	24.36
Hay ..	Area, acs.	303,274	768,388	942,166	1,688,402	2,518,351	2,994,519	2,699,631
	Yld., tons	375.871	767,194	1,067,255	2,024,608	2,867,973	3,902,189	3,487,352
	Av. ,,	1.24	1.00	1.13	1.20	1.14	1.30	1.29
Potatoes(*a*)	Area, acs.	67,911	76,265	112,884	109,685	130,463	149,144	139,445
	Yld., tons	212,896	243,216	380,477	322,524	301,489	388,091	373,176
	Av. ,,	3.13	3.19	3.37	2.94	2.31	2.60	2.68
Sugar Cane(*d*)	Area, acs.	11,576	19,708	45,444	86,950	101,010	128,356	199,440
	Yld., tons	176,632	349,627	737,573	1,367,802	1,682,250	2,436,890	3,155,916
	Av. ,,	15.25	17.74	16.23	15.73	16.65	18.99	15.87
Vineyards ..	Area, acs.	16,253	14,570	48,882	63,677	60,602	92,414	112,120
	Wine, gal.	2,104,000	1,488,000	3,535,000	5,816,087	4,975,147	8,562,573	20,456,341
Total value all agricultural production	£	8,941,000	15,519,000	16,988,000	23,835,000	38,774,000	81,890,000	98,294,503
Pastoral, dairying, etc.—								
Live Stock	Sheep No.	40,072,955	65,092,719	106,421,068	72,040,211	96,886,234	86,119,068	104,267,101
	Cattle ,,	4,277,228	8,010,991	11,112,112	8,491,428	11,828,954	14,441,309	11,963,278
	Horses ,,	701,530	1,088,029	1,584,737	1,620,420	2,278,226	2,438,182	2,122,516
	Pigs ,,	586,017	703,188	845,888	931,309	1,110,721	960,385	989,009
Wool prod., lb. greasy		179,000,000	332,759,000	631,587,000	543,131,661	721,298,288	721,678,346	924,410,553
Butter production	lbs.	(*c*)	(*c*)	42,314,585	103,747,295	212,073,745	267,071,340	252,531,059
Cheese ,,	,,	(*c*)	(*c*)	10,130,945	11,845,153	15,886,712	32,653,003	26,679,197
Bacon and ham	,,	(*c*)	(*c*)	16,771,886	34,020,629	53,335,092	58,626,469	73,634,888
Total estimated value of pastoral and dairying production	£	20,736,000	29,538,000	39,256,000	36,890,000	72,883,000	119,399,000	(*e*) 158,148,000
Mineral production—								
Gold ..	£	7,916,627	5,194,390	5,281,861	14,017,538	10,551,624	4,018,685	(*g*) 2,159,073
Silver and lead	£	36,016	45,622	3,736,352	2,248,598	3,022,117	1,539,992	(*g*) 3,773,756
Copper ..	£	830,242	714,003	367,373	2,215,431	2,564,278	803,957	(*g*) 607,038
Tin.. ..	£	24,020	1,145,889	560,502	448,234	1,209,973	418,418	(*g*) 842,430
Zinc ..	£	369	200	2,979	4,067	1,415,169	283,455	(*g*) 1,178,119
Coal ..	£	330,510	637,865	1,912,353	2,602,733	3,927,360	10,983,757	(*g*) 12,259,769
Total value all mineral production ..	£	9,190,330	7,820,290	12,074,106	21,816,772	23,302,878	19,977,384	(*g*) 23,085,011
Forestry production— Quantity of local timber sawn or hewn	1,000 sup.ft.	(*c*)	(*c*)	(*c*)	452,131	604,794	590,495	613,131
Manufactories—								
No. of factories ..		(*b*)	(*b*)	(*b*)	(*b*)	14,455	18,023	21,579
Hands employed	No.					311,710	395,425	467,247
Wages paid ..	£					27,528,377	68,050,861	90,575,166
Value added in process of manufacture	£					51,259,004	121,674,119	162,325,273
Total value of output	£					133,022,090	320,331,765	408,692,838

(*a*) Partly estimated 1871 and 1881. (*b*) Owing to variation in classification and lack of information effective comparison is impossible. (*c*) Information not available. (*d*) Area of productive cane. (*e*) 1926 figures. (*f*) 31st December, 1927. (*g*) 1927 figures.

STATISTICAL SUMMARY.—AUSTRALIA, 1871 TO 1927—*continued.*

Heading.	Years.						
	1871.	1881.	1891.	1901.	1911.	1921.	1926–27.
Shipping—							
Oversea vessels ent. & cleared No.	2,748	3,284	3,778	4,028	4,174	3,674	3,261
Oversea vessels ent. & cleared ton.	1,312,642	2,549,364	4,726,307	6,541,991	9,984,801	9,503,018	11,163,975
Commerce (*c*)—							
Imports oversea £	17,017,000	29,067,000	37,711,000	42,434,000	66,967,488	103,066,436	164,716,594
,, per head £	10/3/3	12/16/2	11/16/0	11/3/11	14/18/2	18/14/1	26 19 1
Exports oversea £	21,725,000	27,528,000	36,043,000	49,696,000	79,482,258	127,846,535	144,895,183
,, per head £	12/19/6	12/2/8	11/5/6	13/2/2	17/13/10	23/4/1	23/14/3
Total oversea trade £	38,742,000	56,595,000	73,754,000	92,130,000	146,449,746	230,912,971	309,611,777
,, per head £	23/2/9	24/18/10	23/1/6	24/6/1	32/12/0	41/18/2	50/13/4
Customs and excise duties .. £	(*e*)	4,809,326	7,440,869	8,656,530	13,515,005	27,565,199	43,462,981
,, per head, £	(*e*)	2/2/5	2/6/7	2/5/8	2/19/2	5/0/1	7/2/3
Principal Oversea Exports (*a*)—							
Wool lbs. (greasy)	176,635,800	328,369,200	619,259,800	518,018,100	720,364,900	927,833,700	827,799,662
£	9,459,629	13,173,026	19,940,029	15,237,454	26,071,193	47,977,044	60,053,358
Wheat centals	479,954	3,218,792	5,876,875	12,156,035	33,088,704	59,968,334	44,355,189
£	193,732	1,189,762	1,938,864	2,774,643	9,641,608	28,644,155	20,785,414
Flour tons	12,988	49,549	33,363	96,814	175,891	359,734	493,464
£	170,415	519,635	328,423	589,604	1,391,529	5,519,881	6,254,316
Butter lbs.	1,812,700	1,298,800	4,239,500	34,607,400	101,722,100	127,347,400	76,516,497
£	45,813	39,383	206,868	1,451,168	4,637,362	7,968,078	5,447,224
Skins and hides £	100,123	316,878	873,695	1,250,938	3,227,236	3,136,810	8,547,198
Tallow .. £	914,278	644,149	571,069	677,745	1,935,836	1,441,795	1,415,888
Meats .. £	566,780	362,965	460,894	2,611,244	4,303,159	5,542,102	5,198,812
Timber (undressed) £	42,586	118,117	38,448	731,301	1,023,960	1,158,166	1,422,922
Gold .. £	7,184,833	6,445,365	5,703,532	14,315,741	12,045,766	3,483,239	11,373,771
Silver and lead £	37,891	57,954	1,932,278	2,250,253	3,212,584	2,697,130	5,317,018
Copper £	598,538	676,515	417,687	1,619,145	2,345,961	705,358	161,411
Coal .. £	134,355	361,081	645,972	986,957	900,622	1,099,899	965,899
Govt. Railways—							
Lgth. of line open, mls.	970	3,832	9,541	12,579	16,078	23,296	25,523
Capital cost £	19,269,786	42,741,350	99,764,090	123,223,779	152,194,603	237,479,693	303,785,388
Gross revenue £	1,102,650	3,910,122	8,654,085	11,038,468	17,847,837	35,936,900	48,592,836
Working expenses £	608,332	2,141,735	5,630,182	7,133,617	10,945,727	29,969,954	39,990,887
Per cent. of work'g expenses on earnings %	55.17	54.77	65.06	64.63	61.33	83.39	82.30
Postal—							
Letters and postcards dealt with No.	24,382,000	67,640,000	157,297,000	220,853,000	453,063,000	569,343,456	796,145,400
,, per head ,,	14.54	29.61	49.07	58.26	100.90	104.36	130.29
Newspapers dealt with No.	3,336,000	38,063,000	85,280,000	102,727,000	141,638,000	130,882,425	188,715,200
,, per head ,,	7.95	16.66	26.61	27.10	31.54	24.18	30.88
Cheque-paying Banks—							
Note circulation £	2,456,487	3,978,711	4,417,269	3,406,175	876,428*b*	211,187	200,943
Coin & bullion held £	6,168,869	9,108,243	16,712,923	19,737,572	30,024,225	22,092,371	24,475,262
Advances £	26,039,573	57,732,824	129,741,583	89,167,499	116,769,133	233,214,626	253,180,484
Deposits £	21,856,959	53,849,455	98,345,338	90,965,530	147,103,081	273,866,737	343,075,508
Savings Banks							
Number of accounts open ..	100,713	250,070	614,741	964,553	1,600,112	3,327,456	4,461,904
Total deposits £	3,193,285	7,854,480	15,536,592	30,882,645	59,393,682	154,396,051	204,573,963
Aver. per account £	31/14/2	31/8/2	25/5/6	32/0/4	37/2/4	46/8/0	45, 17, 0
,, ,, head of population £	1/18/9	3/10/5	4/18/7	8/3/0	13/8/5	28/0/4	33/3/5
State Schools—							
Number of Schools ..	2,502	4,494	6,231	7,012	8,060	9,445 (*d*)	10,203
Teachers .. No.	4,641	9,028	12,564	14,500	16,971	26,120 (*d*)	29,633
Enrolment ,,	236,710	432,320	561,153	638,478	638,850	819,042 (*d*)	883,925
Aver. attendance ,,	137,767	255,143	350,773	450,246	463,799	666,498 (*d*)	730,571

(*a*) Australian produce, except gold, which includes re-exports. (*b*) Decrease due to prohibition of re-issue.
(*c*) Figures for Commerce for year 1921 relate to year ended 30th June following. (*d*) 1926 figures.
(*e*) Not available.

CHRONOLOGICAL TABLE.

CHRONOLOGICAL TABLE OF CHIEF EVENTS SINCE THE ESTABLISHMENT OF SETTLEMENT IN AUSTRALIA.

NOTE.—The Government was centralized in Sydney, New South Wales, up to 1825, when Tasmania (Van Diemen's Land) was made a separate colony. In the Table, the names now borne by the States serve to indicate the localities.

Year.

1788 N.S.W.—Arrival of "First Fleet" at Botany Bay. Land in vicinity being found unsuitable for settlement, the expedition moved to Sydney Cove (now Port Jackson). Formal possession of Port Jackson taken by Captain Phillip on 26th January. Formal proclamation of colony on 7th February. Branch settlement established at Norfolk Island. French navigator Lapérouse visited Botany Bay. First cultivation of wheat and barley. First grape vines planted.

1789 N.S.W.—First wheat harvest at Parramatta, near Sydney. Discovery of Hawkesbury River. Outbreak of small-pox amongst aborigines.

1790 N.S.W.—"Second Fleet" reached Port Jackson. Landing of the New South Wales Corps. Severe suffering through lack of provisions. First circumnavigation of Australia by Lieut. Ball.

1791 N.S.W.—Arrival of "Third Fleet." Territorial seal brought by Governor King.

1792 N.S.W.—Visit of *Philadelphia*, first foreign trading vessel.

1793 N.S.W.—First free immigrants arrived in the *Bellona*. First Australian church opened at Sydney. Tas.—D'Entrecasteaux discovered the Derwent River.

1794 N.S.W.—Establishment of settlement at Hawkesbury River.

1795 N.S.W.—Erection of the first printing press at Sydney. Descendants of strayed cattle discovered at Cowpastures, Nepean River.

1796 N.S.W.—First Australian theatre opened at Sydney. Coal discovered by fishermen at Newcastle.

1797 N.S.W.—Introduction of merino sheep from Cape of Good Hope.

1798 Tas.—Insularity of Tasmania proved by voyage of Bass and Flinders.

1800 N.S.W.—First export of coal. First Customs House in Australia established at Sydney. Flinders' charts published.

1801 N.S.W.—First colonial manufacture of blankets and linen.

1802 Vic.—Discovery of Port Phillip by Lieut. Murray. S.A.—Discovery of Spencer's and St. Vincent Gulfs by Flinders. Q'land.—Discovery of Port Curtis and Port Bowen by Flinders.

1803 N.S.W.—First Australian wool taken to England by Capt. Macarthur. Issue of "The Sydney Gazette," first Australian newspaper. Vic.—Attempted settlement at Port Phillip by Collins. Discovery of Yarra by Grimes. Tas.—First settlement formed at Risdon by Lieut. Bowen.

1804 N.S.W.—Insurrection of convicts at Castle Hill. Vic.—Abandonment of settlement at Port Phillip. Tas.—Foundation of settlement at Hobart by Collins, and at Yorktown by Colonel Paterson.

1805 N.S.W.—First extensive sheep farm established at Camden by Capt. Macarthur. Portion of convicts from Norfolk Island transferred to Tasmania.

1806 N.S.W.—Shortage of provisions. Tas.—Settlement at Launceston.

1807 N.S.W.—Final shipment of convicts from Norfolk Island. First shipment of merchantable wool (245 lbs.) to England.

1808 N.S.W.—Deposition of Governor Bligh.

1809 N.S.W.—Isaac Nichols appointed to supervise delivery of overseas letters.

1810 N.S.W.—Post-office officially established at Sydney, Isaac Nichols first postmaster. First race meeting in Australia at Hyde Park, Sydney. Tas.—First Tasmanian newspaper printed.

1813 N.S.W.—Passage across Blue Mountains discovered by Wentworth, Lawson, and Blaxland. Macquarie River discovered by Evans.

1814 N.S.W.—Australia, previously known as "New Holland," received present name on recommendation of Flinders. Creation of Civil Courts.

Year.	
1815	N.S.W.—First steam engine in Australia erected at Sydney. Lachlan River discovered by Evans. Tas.—Arrival of first immigrant ship with free settlers. First export of wheat to Sydney.
1816	N.S.W.—Botanic Garden formed at Sydney.
1817	N.S.W.—Oxley's first exploration inland. Discovery of Lakes George and Bathurst and the Goulburn Plains by Meehan and Hume. First bank in Australia opened at Sydney.
1818	N.S.W.—Cessation of free immigration. Liverpool Plains, and the Peel, Hastings, and Manning Rivers discovered by Oxley, and Port Essington by Captain King.
1819	N.S.W.—First Australian Savings Bank opened at Sydney.
1820	Tas.—First importation of pure merino sheep.
1821	Tas.—Establishment of penal settlement at Macquarie Harbour.
1823	N.S.W.—First Australian Constitution. Discovery of gold at Fish River by Assistant-Surveyor McBrien. Qld.—Brisbane River discovered by Oxley.
1824	N.S.W.—Erection into Crown Colony. Executive Council formed. Establishment of Supreme Court at Sydney, and introduction of trial by jury. First Australian Enactment (Currency Bill) passed by the Parliament at Sydney. Proclamation of freedom of the press. First manufacture of sugar. Vic.—Hume and Hovell, journeying overland from Sydney, arrived at Corio Bay. Qld.—Penal settlement founded at Moreton Bay (Brisbane). Fort Dundas Settlement formed at Melville Island, N. Terr.
1825	N.S.W.—Extension of western boundary to 129th meridian. Tas.—Separation of Van Diemen's Land (Tasmania). Qld.—Major Lockyer explored Brisbane River to its source, and discovered coal.
1826	N.S.W.—Settlement in Illawarra District. Vic.—Settlement at Corinella, Western Port, formed by Captain Wright.
1827	N.S.W.—Colony became self-supporting. Feverish speculation in land and stock. Qld.—Darling Downs and the Condamine River discovered by Allan Cunningham. W.A.—Military Settlement founded at King George's Sound by Major Lockyer. First official claim of British Sovereignty over all Australia.
1828	N.S.W.—Second constitution. First Census. Sturt's expedition down Darling River. Cotton first grown in Sydney Botanical Gardens. Gas first used at Sydney. Richmond and Clarence Rivers discovered by Captain Rous. Vic.—Abandonment of settlement at Western Port. Qld.—Cunningham discovered a route from Brisbane to the Darling Downs, and explored Brisbane River.
1829	N.S.W.—Sturt's expedition down Murrumbidgee River. W.A.—Foundation of settlement at Swan River. Foundation of Perth.
1830	N.S.W.—Insurrection of convicts at Bathurst. Sturt, voyaging down Murrumbidgee and Murray Rivers, arrived at Lake Alexandrina. Tas.—Trouble with natives. Black line organized to force aborigines into Tasman's Peninsula, but failed. Between 1830 and 1835, however, George Robinson, by friendly suasion, succeeded in gathering the small remnant of aborigines (203) into settlement on Flinders Island.
1831	N.S.W.—Crown lands first disposed of by public competition. Mitchell's explorations north of Liverpool Plains. Arrival at Sydney of first steamer, *Sophia Jane*, from England. S.S. *Surprise*, first steamship built in Australia, launched at Sydney. First coal shipped from Australian Agricultural Company's workings at Newcastle, N.S.W. First assisted immigration to N.S.W. S.A.—Wakefield's first colonization committee. W.A.—Appointment of Executive and Legislative Councils.
1832	N.S.W.—Savings Bank of N.S.W. established.
1833	N.S.W.—First School of Arts established at Sydney.
1834	N.S.W.—First settlement at Twofold Bay. Vic.—Settlement formed at Portland Bay by Henty Bros. Qld.—Leichhardt reached Gulf of Carpentaria. S.A.—Formation of the South Australian Association. W.A.—Severe reprisals against natives at Pinjarrah.

Year.	
1835	Vic.—John Batman arrived at Port Phillip; made treaty with the natives for 600,000 acres of land; claim afterwards disallowed by Imperial Government. John Pascoe Fawkner founded Melbourne.
1836	N.S.W.—Mitchell's overland journey from Sydney to Cape Northumberland. Vic. "Squatting" formally recognized. Vic.—Proclamation of Port Phillip district as open for settlement. S.A.—Settlement founded at Adelaide under Governor Hindmarsh.
1837	N.S.W.—Appointment in London of Select Committee on Transportation. Vic.—Melbourne planned and named by Governor Bourke. First Victorian post-office established in Melbourne. First overlanders from Sydney arrived at Port Phillip.
1838	N.S.W.—Discontinuance of assignment of convicts. Qld.—Settlement of German missionaries at Brisbane. S.A.—"Overlanding" of cattle from Sydney to Adelaide along the Murray route by Hawden and Bonney. Settlement at Port Essington, Northern Territory, formed by Captain Bremer.
1839	N.S.W.—Gold found at Vale of Clwydd by Count Strezlecki. S.A.—Lake Torrens discovered by Eyre. Port Darwin discovered by Captain Stokes. W.A.—Murchison River discovered by Captain Grey.
1840	N.S.W.—Abolition of transportation to New South Wales. Land regulations—proceeds of sales to be applied to payment for public works and expenditure on immigration. Vic.—Determination of northern boundary. Qld.—Penal settlement broken up and Moreton Bay district thrown open. S.A.—Eyre began his overland journey from Adelaide to King George's Sound.
1841	N.S.W.—Gold found near Hartley by Rev. W. B. Clarke. Separation of New Zealand. W.A.—Completion of Eyre's overland journey from Adelaide to King George's Sound. Tas.—Renewal of transportation.
1842	N.S.W.—Incorporation of Sydney. Vic.—Incorporation of Melbourne. S.A.—Discovery of copper at Kapunda.
1843	N.S.W.—First Representative Constitution (under Act of 1842). First manufacture of tweed. Qld.—Moreton Bay granted legislative representation.
1844	S.A.—Sturt's last expedition inland. Qld.—Leichhardt's expedition from Condamine River to Port Essington.
1845	N.S.W.—Mitchell's explorations on the Barcoo. Qld.—Explorations by Mitchell and Kennedy. S.A.—Discovery of the Burra copper deposits. Sturt discovered Cooper's Creek.
1846	N.S.W.—Initiation of meat preserving. Qld.—Foundation of settlement at Port Curtis. S.A.—Proclamation of North Australia. W.A.—Foundation of New Norcia Mission.
1847	N.S.W.—Iron smelting commenced near Berrima. Overland mail established between Sydney and Adelaide. Vic.—Melbourne created a City. Qld.—Explorations by Leichhardt, Burnett, and Kennedy.
1848	Qld.—Leichhardt's last journey. Kennedy speared by the blacks at York Peninsula. Chinese brought in as shepherds.
1849	N.S.W.—Indignation of colonists at arrival of convict ship *Hashemy*. Exodus of population to goldfields of California. Vic.—*Randolph* prevented from landing convicts. Qld.—Assignation of convicts per *Hashemy* to squatters on Darling Downs. W.A.—Commencement of transportation to Western Australia.
1850	N.S.W.—Final abolition of transportation. First sod of first Australian railway turned at Sydney. Vic.—Gold discovered at Clunes by Hon. W. Campbell. Representative government granted. S.A.—Representative government granted. W.A.—Pearl oysters found by Lieut. Helpman at Saturday Island Shoal. Tas.—Representative government granted.
1851	N.S.W.—Payable gold discovered by Hargraves at Lewis Ponds and Summerhill Creek. Telegraph first used. Vic.—Separation of Port Phillip—erected into independent colony under the name of Victoria. Discovery of gold in various localities. "Black Thursday," 6th Feb., a day of intense heat, when several persons died and a vast amount of damage to property was occasioned by fires. W.A.—Proclamation of Legislative Council Act.

Year.	
1852	N.S.W.—Arrival of the *Chusan*, first P. and O. mail steamer from England. S.A.—First steamer ascends the Murray River to the junction with the Darling. Tas.—Meeting of first elective Council protests against transportation. Payable gold discovered at The Nook, near Fingal, and at Nine Mile Springs.
1853	Tas.—Abolition of transportation.
1854	Vic.—Opening of first Victorian railway—Flinders-street to Port Melbourne. Riots on Ballarat gold-fields. Storming of the Eureka Stockade, 3rd Dec.
1855	N.S.W.—Opening of railway—Sydney to Parramatta. Mint opened. Gregory's expedition in search of Leichhardt.
1856	N.S.W.—Pitcairn Islanders placed on Norfolk Island. W.A.—A. C. Gregory's expedition in search of Leichhardt. Responsible Government in N.S.W., Vic., S.A., and Tas. (Act of 1855).
1857	N.S.W.—Wreck of the *Dunbar* (119 lives lost), and *Catherine Adamson* (21 lives lost), at Sydney Heads. Select Committee on Federation. Vic.—Manhood suffrage and vote by ballot. S.A.—Passage of Torrens' Real Property Act.
1858	N.S.W.—Establishment of manhood suffrage and vote by ballot. Telegraphic communication between Sydney, Melbourne, and Adelaide. Qld.—Canoona gold rush.
1859	Qld.—Proclamation of Queensland as separate colony. Tas.—First submarine cable, via Circular Head and King Island to Cape Otway.
1860	Vic.—Burke and Wills left Melbourne and crossed to Gulf of Carpentaria. S.A.—Copper discoveries at Wallaroo and Moonta.
1861	N.S.W.—Anti-Chinese riots at Lambing Flat and Burrangong gold-fields. Opening of first tramway in Sydney. Regulation of Chinese immigration. Vic.—Burke and Wills perished at Cooper's Creek, near Innamincka, S.A.
1862	N.S.W.—Abolition of State aid to religion. Real Property Act. S.A.—Stuart crossed the Continent from south to north. W.A.—First export of pearl-shell.
1863	Vic.—Intercolonial Conference at Melbourne. S.A.—Northern Territory taken over. W.A.—Initiation of settlement in the North-west district. Henry Maxwell Lefroy discovered and traversed area now comprised in the Coolgardie-Kalgoorlie gold-field.
1864	Qld.—First railway begun and opened. First sugar made from Queensland cane. Tas.—First successful shipment of English salmon ova.
1865	N.S.W.—Destruction by fire of St. Mary's Cathedral, Sydney.
1866	N.S.W.—Passage of Public Schools Act of (Sir) Henry Parkes. S.A.—Introduction of camels for exploration, etc.
1867	Vic.—Imposition of protective tariff. Qld.—Discovery of gold at Gympie.
1868	N.S.W.—Attempted assassination of the Duke of Edinburgh at Clontarf, near Sydney. W.A.—Arrival of the *Hougomont*, last convict ship. Tas.—First sod of first railway (Launceston and Western) turned by Duke of Edinburgh.
1869	W.A.—First telegraph line opened from Perth to Fremantle.
1870	N.S.W.—Intercolonial Exhibition opened at Sydney. Imperial troops withdrawn. Vic.—Intercolonial Congress at Melbourne. S.A.—Commencement of trans-continental telegraph.
1871	N.S.W.—Permanent military force raised. W.A.—Passage of Elementary Education Act. Forrest's explorations. Tas.—Discovery of tin at Mount Bischoff. Launceston-Western railway opened for traffic.
1872	N.S.W.—International Exhibition at Sydney. Vic.—Mint opened. S.A.—Cable from Java to Port Darwin. Completion of transcontinental telegraph line.
1873	N.S.W.—Intercolonial Conference at Sydney. First volunteer encampment. Inauguration of mail service with San Francisco.
1874	N.S.W.—Triennial Parliaments Act passed. Intercolonial Conference. W.A.—John and Alexander Forrest arrived at Overland Telegraph from Murchison.
1875	Qld.—Transfer of Port Albany Settlement to Thursday Island.
1876	N.S.W.—Completion of cable—Sydney (La Perouse) to Wellington (Wakapuaka). W.A.—Giles crosses colony from east to west. Tas.—Death of Truganini, last representative of Tasmanian aborigines.

Year.

1877 W.A.—Opening of telegraphic communication with South Australia.

1878 Qld.—Restriction of Chinese immigration.

1879 N.S.W.—First artesian bore at Killara. International Exhibition at Garden Palace, Sydney. First steam tramway. W.A.—A. Forrest's explorations in the Kimberley district, and discovery of the Fitzroy pastoral country.

1880 N.S.W.—Public Instruction Act passed. Vic.—Opening of first Victorian International Exhibition at Melbourne.

Federal Conference at Melbourne and Sydney.

1881 N.S.W.—Further restrictions on Chinese immigration.

Visit to Australia of T.R.H. Prince Albert Victor and Prince George.

1882 N.S.W.—Garden Palace destroyed by fire. W.A.—Nugget of gold found between Roebourne and Cossack.

1883 N.S.W.—Discovery of silver at Broken Hill. Completion of railway between New South Wales and Victoria. Qld.—Annexation of New Guinea—repudiated by Imperial authorities.

Federal Conference held at Sydney. Federal Council created.

1884 Federation Bill passed in Victoria and rejected in New South Wales. British protectorate declared over New Guinea.

1885 N.S.W.—Military contingent sent to the Sudan. Opening of the Broken Hill Proprietary Silver Mines. W.A.—Gold found by prospectors on the Margaret and Ord Rivers in the Kimberley district. Tas.—Silver-lead discovered at Mount Zeehan.

1886 Tas.—Discovery of gold and copper at Mount Lyell.

First session of Federal Council met at Hobart on the 26th January.

1887 N.S.W.—Disaster at Bulli coal mine (81 lives lost). Peat's Ferry (Hawkesbury River) railway accident. S.A.—International Exhibition at Adelaide. W.A.—Cyclone destroyed nearly the whole pearling fleet off the Ninety-Mile Beach—200 lives lost. Gold discovered at Southern Cross.

Australasian Conference in London. Australasian Naval Defence Force Act passed.

1888 N.S.W.—Centennial celebrations. Restrictive legislation against Chinese, imposing poll-tax of £100. Vic.—Second Victorian International Exhibition held at Melbourne. Qld.—Railway communication opened between Sydney and Brisbane.

Conference of Australian Ministers at Sydney to consider question of Chinese immigration. First meeting of the Australasian Association for the Advancement of Science held in Sydney.

1889 Qld.—Direct railway communication established between Brisbane and Adelaide. W.A.—Framing of new Constitution.

1890 W.A.—Responsible Government granted.

Meeting at Melbourne of Australasian Federation Conference.

1891 N.S.W.—Election to Legislative Assembly of 35 Labour members. Arrival of Australian Auxiliary Squadron. Cessation of assisted immigration. W.A.—Discovery of gold on the Murchison.

Federal Convention in Sydney: draft bill framed and adopted.

1892 W.A.—Discovery of gold by Messrs. Bayley and Ford at Coolgardie.

1893 N.S.W.—Departure by the *Royal Tar* of colonists for "New Australia."

Financial crisis, chiefly affecting the eastern States.

1895 N.S.W.—Free-trade tariff. Land and income taxes introduced.

Conference of Premiers at Hobart *re* Federation.

1896 N.S.W.—People's Federal Convention at Bathurst.

1897–8 Sessions of Federal Convention at Adelaide, Sydney, and Melbourne.

1898 N.S.W.—First surplus of wheat for export.

Draft Federal Constitution Bill submitted to electors in Victoria, New South Wales, South Australia, and Tasmania. Requisite statutory number of votes not obtained in New South Wales.

Year.

1899 First contingent of Australian troops sent to South Africa. Conference of Premiers in Melbourne to consider amendments to Federal Constitution Bill. Referendum—Bill accepted by New South Wales, Victoria, Queensland, South Australia, and Tasmania.

1900 N.S.W.—Old-age pensions instituted.

Contingents of naval troops sent to China. Commonwealth Constitution Act received Royal Assent, 9th July. Proclamation of Commonwealth signed, 17th September. Mr. (afterwards Sir) Edmund Barton formed first Federal Ministry.

1901 Vic.—Old-age Pensions instituted.

Proclamation of the Commonwealth at Sydney. First Federal Parliament opened at Melbourne by the Duke of Cornwall and York. Interstate freetrade established.

1902 N.S.W.—Disastrous explosion at Mount Kembla Colliery—95 lives lost. W.A.—Opening of pumping station at Northam in connexion with Gold-fields water supply. Completion of Pacific Cable (all-British).

First Federal Tariff.

1903 Vic.—Railway Strike (Enginemen). W.A.—Coolgardie and Kalgoorlie Water Supply Scheme completed.

Inauguration of the Federal High Court.

1905 N.S.W.—Re-introduction of assisted immigration.

1906 Wireless telegraphy installed between Queenscliff, Vic., and Devonport, Tas. Papua taken over by Commonwealth.

1907 N.S.W.—Telephone, Sydney to Melbourne, opened.

Imperial Conference in London.

1908 Vic.—Railway accident at Braybrook Junction (Sunshine)—44 killed, 412 injured; compensation paid, £126,000.

Canberra chosen as site of Federal Capital.

1909 Imperial Defence Conference in London—Commonwealth ordered two destroyers and one first-class cruiser for fleet unit. Visit of Lord Kitchener to report and advise on Commonwealth military defence. Loss of the *Waratah* with 300 passengers and crew.

1910 Vic.—Railway accident at Richmond—9 killed, over 400 injured; compensation paid, £129,000.

Referendum on financial relations between the Commonwealth and the States. Penny postage. Arrival of the *Yarra* and *Parramatta*, first vessels of Australian navy. Australian Notes Act passed and first Commonwealth notes issued. Admiral Sir R. Henderson visited Australia to advise on naval defence.

1911 First Federal Census. Transfer of Northern Territory to Commonwealth. Introduction of compulsory military training. Launch of Commonwealth destroyer *Warrego* at Sydney. Establishment of penny postage to all parts of British Empire.

1912 Opening of Commonwealth Bank. First payments of Maternity Bonus. First sod turned at Port Augusta of Trans-Australian Railway (Port Augusta to Kalgoorlie). Gift of £1,000,000 to charities by Mrs. Walter Hall, Sydney, N.S.W.

1913 Arrival of battle cruiser *Australia*, and cruisers *Melbourne* and *Sydney*. Federal Capital named Canberra and foundation stone laid. Appointment of Interstate Commission.

1914 Visit of General Sir Ian Hamilton to report on military defence scheme. Double dissolution of Federal Parliament. Visit of British Association for the Advancement of Science.

European War. Australian Navy transferred to Imperial Navy. Australian troops offered to, and accepted by Imperial Government. Captured vessels added to Australian fleet. Submarine AE1 lost at sea whilst on service in the vicinity of New Britain. German Pacific possessions seized by Australian expeditionary force (military and naval). German Cruiser *Emden* destroyed at North Cocos Island by H.M.A.S. *Sydney*.

Year.

1915 Opening of Broken Hill Proprietary's Ironworks at Newcastle, N.S.W. Navy Department created.

Australian troops landed at Gallipoli on 25th April. Loss of Submarine AE2 in operations at the Dardanelles. Census taken of Wealth and Income, and of males in Australia between ages of 17 and 60. Australian troops withdrawn from Gallipoli on 19th December.

1916 Record wheat harvest (180,000,000 bushels). Australian mounted troops operate in Egypt; afterwards join Desert Mounted Column. Other Australian troops transferred to France. Visit of Rt. Hon. W. M. Hughes, P.C., K.C., Prime Minister, to Canada, Great Britain, and South Africa, and to troops in England and France. Acquisition of steamships by the Commonwealth. First Military Service Referendum.

1917 National Ministry formed. General strike. Kalgoorlie-Port Augusta railway completed. Second Military Service Referendum.

1918 Population of Australia reaches 5,000,000. Australian troops in France formed into an Army Corps, commanded by Lieut.-Gen. Sir John Monash. Cessation of hostilities and surrender of Germany. Repatriation Department created. Australia House (Strand, London) opened by the King. Deaths of Sir G. H. Reid and of Lord Forrest of Bunbury.

1918–1919 Visit to America and Europe of Rt. Hon. W. M. Hughes, P.C., K.C., Prime Minister, representative at Peace Conference.

1919 Epidemic of influenza. Aerial flight England to Australia by Capt. Sir Ross Smith and Lieut. Sir Keith Smith. Death of Hon. Alfred Deakin. Visit to Australia of General Sir W. Birdwood. Visit of Admiral Lord Jellicoe.

1920 Visit to Australia of H.R.H. the Prince of Wales. Aerial flight England to Australia by Lieuts. Parer and McIntosh. Deaths of Rt. Hon. Sir Edmund Barton and of Rt. Hon. Sir Samuel Griffith.

1921 Visit to Imperial Conference of Rt. Hon. W. M. Hughes, P.C., K.C., Prime Minister. Second Commonwealth Census. Germany's Indemnity fixed (Australia's share approximately £63,000,000). Visit of Senator Pearce (Minister for Defence) to Disarmament Conference at Washington. Colliery disaster at Mt. Mulligan, Queensland—75 lives lost. Mandate given to Australia over Territory of New Guinea. First direct wireless press message, England to Australia.

1922 Economic Conference at Sydney. First lock on River Murray opened at Blanchetown, South Australia. Queensland Legislative Council abolished.

1923 Rt. Hon. S. M. Bruce, P.C., M.C., Prime Minister. Premiers' Conference, Melbourne. First sod, site of Federal Parliament House at Canberra, turned. Pan-Pacific Science Congress, Melbourne. Police dispute in Melbourne, with accompanying riots.

1923–24 Visit of Rt. Hon. S. M. Bruce, P.C., M.C., Prime Minister, to Imperial Conference, London, and afterwards to European and Gallipoli battlefields (September, 1923, to March, 1924).

1924 H.M.A.S. *Australia* sunk. Sea-plane flight round Australia by Wing-Commander Goble and Lieut. McIntyre. British Empire Exhibition at Wembley. First sale of land leases at Canberra. Visit of British cruiser squadron. Directorate of Commonwealth Bank appointed. Loan by British Government of £34,000,000 for Imperial migration.

1925 Visit of American fleet. Solar Observatory established at Canberra. De Pinedo's flight, Rome to Australia and return. Brisbane-Kyogle railway commenced. North Shore (Sydney) Bridge commenced. Department of Markets and Migration established.

1926 Population of Australia reached 6,000,000. Referendum—Industry and Commerce, Widening State Powers: proposals rejected. Council for Scientific and Industrial Research established. Cobham's flight, London to Australia and return. North-West Australia Commission established.

Year.

1926–27 Visit to Imperial Conference of Rt. Hon. S. M. Bruce, P.C., M.C., Prime Minister; return via America. Equality in Dominion Status; new title for King.

1927 Transfer of Seat of Federal Government from Melbourne to Canberra. New Parliament House opened by H.R.H. the Duke of York.

1928 Aerial flights from England to Australia, by Mr. Bert Hinkler; from America to Australia, and from Australia to New Zealand and return by Messrs. Kingsford-Smith and Ulm, with navigator and wireless operator.

Referendum on financial relations between the Commonwealth and the States.

OFFICIAL YEAR BOOK

OF THE

COMMONWEALTH OF AUSTRALIA, 1927,

AND EARLIER YEARS.

CHAPTER I.

DISCOVERY, COLONIZATION, AND FEDERATION OF AUSTRALIA.

§ 1. Early Knowledge of Australia.

1. **Introduction.**—It is proposed to give here only a brief summary of the more important facts relating to the early history of Australian discovery. A more complete account of this subject, together with bibliographical references thereto, may be found in Year Book No. 1 (pp. 44 to 51), although this account must be modified somewhat in view of later investigations.

2. **Early Tradition.**—It would appear that there was an early Chaldean tradition as to the existence of an Austral land to the south of India. Rumours to that effect in course of time found their way to Europe, and were probably spread by travellers from Indian seas, more especially by the Greek soldiers who accompanied Alexander the Great [B.C. 356–323] to India. References to this *Terra Australis* are found in the works of Ælianus [A.D. 205–234], Manilius [probably a contemporary of Augustus or Tiberius Cæsar], and Ptolemy [A.D. 107–161]. In some of the maps of the first period of the Middle Ages there is evidence which might warrant the supposition of the knowledge of the existence of a *Terra Australis*, while some idea of the Austral land appears in the maps and manuscripts of the fourteenth and fifteenth centuries. But much of the map-drawing in these early days was more or less fanciful, and there is no evidence definitely connecting this so-called *Terra Australis* with Australia.

3. **Discovery of Australia.**—(i) *General.*—The Venetian traveller, Marco Polo [1254–1324], refers to a land called Locac, which through a misunderstanding of his meaning was long thought to be Australia. But Marco Polo knew nothing of any land to the south of Java, and in any case the description given of the so-called Locac could not possibly be applied to Australia, as the writer speaks of elephants, etc. On a Mappamundi in the British Museum, of not later date than 1489, there is a coast-line which has been considered to represent the west coast of Australia. Investigation by Wood and others proves this claim to be merely fanciful. Martin Behaim's globe, the

oldest known globe extant, constructed in 1492, also shows what purports to be a part of Australia's coast-line, and a globe discovered in Paris bears an inscription to the effect that the *Terra Australis* was discovered in 1499. These also have other countries located in impossible positions. The term *Terra Australis* was, however, also applied to the region now known as Tierra del Fuego, hence little weight can be attached to this reference.

In the Dauphin map [about 1530-1536] Jave la Grande has been supposed by some to represent Australia, but an inspection of the fanciful animals and other figures thereon lends no weight to the idea. As a matter of fact much of this map-drawing was simply an attempt to support the old notion that the land surface of the southern hemisphere must balance that of the northern.

(ii) *Arab Expeditions.* It has been stated that the Arabs had come to Australia long before the Portuguese, the Spanish, or the Dutch, but there is no evidence to support the statement.

(iii) *Spanish and Portuguese Expeditions.* The last decade of the fifteenth century and the commencement of the sixteenth saw numerous expeditions equipped in the ports of Spain and Portugal for the purpose of exploiting the new world. The Portuguese rounded the southernmost cape of Africa, which became known as the Cape of Good Hope, and pushed eastward. The Spaniards, relying on the scientific conclusion that the world was spherical, attempted to get to the east by deliberately starting out west, Magalhaens by so doing reaching the Philippine Islands in 1521.

It may be mentioned that in 1606, Quiros, on reaching the island that has retained the name of Espiritu Santo (the largest island of the New Hebrides group) thought that he had come to this great land of the South, and therefore named the group *La Austrialia del Espiritu Santo.* Torres, who had been with him, passed through the strait which now bears his name, and proceeded to the Philippine Islands. This voyage marks the close of Spanish activity in the work of discovery in the South Seas.

(iv) *Discoveries by the Dutch.* With the decline of Portuguese and Spanish naval supremacy came the opportunity of the Dutch for discovery. Cornelius Wytfliet's map, of which there was an English edition, published at Louvain in 1597, indicates roughly the eastern and western coasts of Australia, as well as the Gulf of Carpentaria. The following often quoted passage, occurs in Wytfliet's "*Descriptionis Ptolemaicae Augmentum*" "The *Australis Terra* is the most southern of all lands. It is separated from New Guinea by a narrow strait. Its shores are hitherto but little known, since after one voyage and another, that route has been deserted and seldom is the country visited, unless when sailors are driven there by storms. The *Australis Terra* begins at one or two degrees from the equator, and is maintained by some to be so great in extent that, if it were thoroughly explored, it would be regarded as a fifth part of the world."

The Dutch East India Company, in 1605, sent the *Duyfken* from Bantam to explore the Islands of New Guinea. During March in the following year the *Duyfken* coasted along the southern shores of New Guinea, and followed the west coast of Cape York peninsula as far as Cape Keer-Weer (Turn again). Dirck Hartogs (on the plate in the Amsterdam Museum recording his voyage the name is written Dirck Hatichs), in the *Eendracht* in 1616, sailed along a considerable part of the west coast of the Continent. It may be mentioned that the route was not definitely selected, but that the navigator simply went further East than the usual course from the Cape to Java.

In 1618 the *Zeewolf* found land in lat. 20° 15′ south, and in the following year Frederik Houtman discovered the reef off the west coast, now known as *Houtman's Abrolhos.*

In 1622 the Dutch vessel *Leeuwin* rounded the Cape, which now bears that name, at the south-west of the continent, and in 1623 the Dutch vessels *Pera* and *Arnhem* discovered Arnhem Land, the peninsula on the western side of the Gulf of Carpentaria, which was so named in compliment to Peter Carpentier, Governor of the Dutch East India Company.

In 1627, Francis Thysz, commander of the *Gulde Zeepaerd*, with Pieter Nuyts, of the Dutch Council of Seventeen, on board, coasted along a portion of the shore of the Great Australian Bight. In 1628, De Witt, commander of the *Vianen*, discovered land on the north-west, viz., in about latitude 21° S. The *Batavia*, commanded by Francis Pelsart, was wrecked on the western coast of Australia in 1629. Pelsart was the first to carry to Europe an authentic account of the west coast of Australia, which, however, he described in the most unfavourable terms. The yachts *Amsterdam* and *Wesel*, under Gerrit Pool, visited the Gulf of Carpentaria in 1636.

Abel Janszoon Tasman, in command of two vessels, the *Heemskerck* and *Zeehaen*, set out from Batavia in 1642 to ascertain the extent of the great southern continent. He named Van Diemen's Land, imagining it to be part of Australia proper, and sailing north-easterly discovered New Zealand and returned to Batavia. In his second voyage in 1644, Tasman visited the northern coast of Australia, sailing round the Gulf of Carpentaria and along the north-west coast as far down as the Tropic of Capricorn. The period of Dutch discoveries may be said to have ended with Tasman's second voyage, and, with the decline of Dutch maritime power, their interest in Australian discovery vanished. It may, however, be pointed out that William de Vlamingh landed at the mouth of the Swan River at the end of 1696.

4. Discoveries by the English.—The north-western shores of Australia were first visited by William Dampier, in the *Cygnet*, in 1688. In describing the country, Dampier stated that he was certain that it joined neither Asia, Africa, nor America. In 1699 he again visited Australia, in command of H.M.S. *Roebuck*, and on his return to England published an account in which a description is given of trees, flowers, birds, and reptiles observed, and of encounters with natives.

It was a question at the end of the seventeenth century whether Tasmania and New Zealand were parts of Australia, or whether they were separated from it, but themselves formed part of a great Antarctic Continent. Lieutenant James Cook's first voyage, though primarily undertaken for the purpose of observing the transit of Venus from Otaheite, had also for its objective to ascertain whether the unexplored part of the southern hemisphere were only an immense mass of water, or contained another continent. In command of H.M.S. *Endeavour*, a barque of 370 tons burthen, carrying about eighty-five persons, and accompanied by Sir Joseph Banks, Dr. Solander the naturalist, Green the astronomer, draughtsmen, and servants, Cook, after observing the transit of Venus at Otaheite, turned towards New Zealand, sighting that land on the 8th October, 1769, in the neighbourhood of Poverty Bay. Circumnavigating the North and South Islands, he proved that New Zealand was connected neither with the supposed Antarctic continent nor with Australia, and took formal possession thereof in the name of the British Crown. On the 20th April, 1770, at 6 a.m., Cook sighted the Australian mainland at a place he called Point Hicks, naming it after his first-lieutenant, who first saw it. Coasting northwards, Botany Bay was discovered on the 29th April, 1770. The *Endeavour* dropped anchor and Cook landed on the following day. On the 2nd May, 1770, a seaman named Sutherland died and was taken ashore to be buried; he was probably the first British subject buried on Australian soil. Cook sailed along the coast in a northerly direction for nearly 1,300 miles until the 12th June, 1770, when the *Endeavour* was seriously damaged by striking a coral reef in the vicinity of Trinity Bay. Repairs occupied nearly two months, and the *Endeavour* then again set her course to the north, sailing through Torres Straits and anchoring in the Downs on the 14th June, 1771. In 1772, Cook was put in command of the ships *Resolution* and *Adventure*, with a view of ascertaining whether a great southern continent existed, and having satisfied himself that, even if it did, it lay so far to the south as to be useless for trade and settlement, he returned to England in 1774. Cooks' last voyage was undertaken in 1776, and he met his death on the 14th February, 1779, by which date practically the whole coast of Australia had been explored. The only remaining discovery of importance was the existence of a channel between Tasmania and Australia. This was made by Flinders and Bass in 1798.

§ 2. The Annexation of Australia.

1. Annexation of Eastern Part of Australia, 1770.—Although representatives of the nations mentioned in the previous section landed or claim to have landed on the shores of Australia on various occasions during the sixteenth and seventeenth centuries, it was not until the 23rd August, 1770, that the history of Australia was brought into definite political connexion with western civilization. It was on that date that Captain Cook took possession "of the whole eastern coast, from lat. 38° to this place, lat. 10½° S., in right of His Majesty King George the Third." Cook, however, proclaimed British sovereignty only over what are now the eastern parts of New South Wales and Queensland, and formal possession, on behalf of the British Crown, of the whole of the eastern part of the Australian Continent and Tasmania was not taken until the 26th January, 1788. It was on this last date that Captain Phillip's commission, first issued to him on the 12th October, 1786, and amplified on the 2nd April, 1787, was read to the people whom he had brought with him in the "First Fleet."

A full historical account of the period referred to may be found in the "Historical Records of New South Wales," vol. I., parts 1 and 2.

2. Original Extent of New South Wales.—The commission appointed Phillip "Captain-General and Governor-in-Chief in and over our territory called New South Wales, extending from the Northern Cape or extremity of the coast called Cape York, in the latitude of ten degrees thirty-seven minutes south, to the southern extremity of the said territory of New South Wales or South Cape, in the latitude of forty-three degrees thirty-nine minutes south, and of all the country inland westward as far as the one hundred and thirty-fifth degree of east longitude reckoning from the meridian of Greenwich, including all the islands adjacent in the Pacific Ocean within the latitudes aforesaid of ten degrees thirty-seven minutes south and forty-three degrees thirty-nine minutes south."

Although in November, 1769, Captain Cook had taken possession of the North Island of New Zealand, and in January, 1770, also of the South Island, it is a matter of doubt whether, at the time when Captain Phillip's commission was drawn up, New Zealand was considered as one of the "islands adjacent in the Pacific Ocean." The facts that under the Supreme Court Act (Imperial) of 1823, British residents in New Zealand were brought under the jurisdiction of the court at Sydney, while in 1839 there was a proposal on the part of the British Government to appoint a consul in New Zealand, would leave this an open question, as nothing more than extra-territorial jurisdiction may have been intended. Various hoistings of flags notwithstanding, New Zealand does not appear to have unequivocally become British territory until 1840. In that year, on the 29th January, Captain Hobson arrived at the Bay of Islands. On the following day he read the commission, which extended the boundaries of the colony of New South Wales so as to embrace and comprehend the Islands of New Zealand. On the 5th February, the Treaty of Waitangi, made with the native chiefs, was signed. Finally, on the 21st May, British sovereignty over the islands of New Zealand was explicitly proclaimed. From that date until the 3rd May, 1841, New Zealand was a dependency of New South Wales.

3. Extension of New South Wales Westward, 1825.—On the 17th February, 1824, Earl Bathurst advised Sir Thomas Brisbane that he had recommended to His Majesty the despatch of a ship of war to the North-west Coast of New Holland for the purpose of taking possession of the coast between the Western Coast of Bathurst Island and the eastern side of Coburg Peninsula. Captain James J. Gordon Bremer of H.M.S. *Tamar*, who was selected for this purpose, took possession on the 20th September, 1824, of the coast from the 135° to the 129° east longitude. On the 16th July, 1825, the whole territory between those boundaries was described in Darling's Commission as being within the boundaries of New South Wales, thus increasing its area by 518,134 square miles, and making it, including New Zealand and excluding Tasmania, 2,076,308 square miles, or also excluding New Zealand, 1,972,446 square miles.

4. Annexation of Western Australia, 1827.—An expedition, sent by Lieut.-General Sir Ralph Darling, then Governor of New South Wales, under Major Lockyer, to found a settlement at King George III. Sound, sailed from Sydney on the 9th November, 1826, landed at the Sound on the 26th December following, and hoisted the British flag. Captain Stirling, in command of H.M.S. *Success*, arrived at Sydney a few weeks after the departure of the expedition to King George's Sound. He obtained the Governor's permission to visit Swan River with the view to seizing a position on the Western Coast and reporting upon its suitability as a place of settlement Captain Stirling left Sydney on the 17th January, 1827, and on his return in the following April submitted a glowing report on what he described as a "rich and romantic country," urging its occupation for the purpose of settlement. He left England in July, 1827, continuing his advocacy—notwithstanding much discouragement—with unabated enthusiasm. He was at last successful, the result being mainly due to the formation of an association of prospective settlers having capital at their disposal. He was appointed Lieut.-Governor, and with a party of settlers arrived at Garden Island, near the Swan River, in the ship *Parmelia*, in June, 1829. On the 2nd of the preceding month Captain Fremantle, in command of H.M.S. *Challenger*, arrived and hoisted the British flag on the South Head of Swan River, again asserting possession of "all that part of New Holland, which is not included within the territory of New South Wales." Thus, before the middle of 1829, the whole territory now known as the Commonwealth of Australia had been constituted a dependency of the United Kingdom.

§ 3. The Creation of the Several Colonies.

1. **New South Wales as Original Colony.**—In Governor Phillip's commission of 1786, the mainland of Australia was divided by the 135th meridian of east longitude into two parts. The earliest colonists believed that Van Diemen's Land—the present State of Tasmania—was actually joined to the mainland, and it was not till 1798 that the contrary was known. In that year, by sailing through Bass Straits. Flinders and Bass proved that it was an island. The territory of New South Wales, as originally constituted, and of New Zealand, which may be included, although Cook's annexation was not properly given effect to until 1840, was thus :—

	Square Miles.
Australia, east of meridian 135° E.	1,454,312
Van Diemen's Land	26,215
New Zealand	103,862
Total	1,584,389

The western part of Australia, not then annexed, comprised 1,494,054 square miles.

2. **Separation of Van Diemen's Land, 1825.**—In 1825, Van Diemen's Land, as Tasmania was then called, was politically separated from New South Wales, being constituted a separate colony on the 14th June of that year. This reduced the area of New South Wales and its territorial dependencies by 26,215 square miles, that is, to 1,558,174 square miles.

3. **Western Australia constituted a Colony, 1829.**—The territory westward of the 129th meridian, which comprised 975,920 square miles and was formerly not included in New South Wales, constituted the area of Western Australia, now one of the six States of the Commonwealth. It was distinct and independent of New South Wales; though until 1831, the settlement on King George's Sound remained under the latter jurisdiction. The Australian colonies at this time were as indicated in the following table :—

Colony.	Date of Annexation.	Date of Creation.	Date of First Permanent Settlement.	Area Square Miles.
New South Wales (including New Zealand)	1770	1786	1788	2,076,308
Van Diemen's Land		1825	1803	26,215
Western Australia	1827	1829	1829	975,920

4. **Creation of South Australia as a Province, 1836.**—On the 15th August, 1834, the Act 4 and 5 William IV., cap. 95, was passed, creating South Australia a "province," and towards the end of the year 1836 settlement took place. The first Governor, Captain Hindmarsh, R.N., arrived at Holdfast Bay on the 28th December, 1836, and on the same day the new colony was officially proclaimed. The new colony embraced 309,850 square miles of territory, which, lying south of the 26th parallel of south latitude, and between the 141st and 132nd meridians of east longitude, was up to that time included within the territory of New South Wales. Thus the area of New South Wales and New Zealand was reduced to 1,766,458 square miles.

5. **Separation of New Zealand, 1840.**—New Zealand, nominally annexed by Captain Cook and formally declared by proclamation in 1840 as a dependency of New South Wales, was, by letters patent of the 16th November of that year, constituted a separate colony under the powers of the Act 3 and 4 Vic., cap. 62, of the 7th August, 1840. Proclamation of the separation was made on the 3rd May, 1841. The area of the colony is 103,862 square miles. This separation reduced the political territory of New South Wales to 1,662,596 square miles.

6. **The Colony of Northern Australia, 1847.**—In the year 1846, when the British Government was experiencing difficulty as regards the transportation of convicts, an attempt was made by Mr. Gladstone, then Colonial Secretary, to establish a purely penal colony, without free settlers (at least at the outset), to be called Northern Australia. This colony did not succeed in securing a permanent place on the map, though its intended metropolis was successfully established and still bears Mr. Gladstone's name. The new colony comprised such of the territories of the colony of New South Wales as lay to the northward of latitude 26° S. Sir Charles Fitzroy, then Governor of New South Wales, was by letters patent appointed Governor of Northern Australia, the actual administration being left in the hands of a Superintendent, who was to be implicitly guided by instruction from the Governor. At the same time Northern Australia was constituted a separate colony under its own Government, although the authority which the Secretary of State for the Colonies would otherwise exercise had been deputed in the first instance to the Governor of New South Wales. In the *London Gazette* of the 8th May, 1846, Colonel Barney, R.E., was appointed Lieutenant-Governer of Northern Australia, and on the 25th January, 1847, he reached Port Curtis, accompanied by other public officers of the new colony. On the 30th January, the ceremony of swearing in the officials of Northern Australia was proceeded with, and on the same day the first *Government Gazette* of the new colony was issued in manuscript. This gazette contained a formal proclamation to the effect that all the land lying to the north of latitude 26° S. should thereafter be known as Northern Australia, and specified the names of the members of the Executive and Legislative Councils of the new colony. The headquarters of the Superintendent and other officials were established at Gladstone, although no other steps appear to have been taken towards securing a permanent settlement. In July, 1846, when Earl Grey succeeded Mr. Gladstone as Secretary of State for the Colonies, one of his first official steps was the complete reversal of the policy of his predecessor with respect to the founding of the new colony of Northern Australia, and by a dispatch dated the 15th November, 1846, Sir Charles Fitzroy was informed that the letters patent under which the new colony was constituted had been revoked. This news was received at Gladstone on the 15th April, 1847, and on the 9th May following the settlement was broken up. The territories comprised in the Colony of Northern Australia then reverted to New South Wales.

7. **Separation of Victoria, 1851.**—In 1851, what was known as the "Port Phillip District" of New South Wales, was constituted the Colony of Victoria, "bounded on the north and north-west by a straight line drawn from Cape Howe to the nearest source of the River Murray, and thence by the course of that river to the eastern boundary of the colony of South Australia." The area of the new colony was 87,884 square miles, and its separate existence took effect from the 1st July, 1851, upon the issuing of the writs for the first election of elective members of the Legislative Council; this reduced the territory of New South Wales to 1,574,712 square miles.

8. **Separation of Queensland, 1859.**—The northern squatting districts of Moreton, Darling Downs, Burnett, Wide Bay, Maranoa, Leichhardt, and Port Curtis, together with the reputed county of Stanley, were granted an independent administration and formed

into a distinct colony under the name of Queensland, by letters patent dated the 6th June, 1859, although separation from New South Wales was not consummated until the 10th December of the same year, upon the assumption of office of the first Governor. The territory originally comprised in the new colony was described in the letters patent as being so much of the colony of New South Wales as lies northwards of a line commencing on the sea coast at Point Danger, in latitude about 28° 8′ south, running westward along the Macpherson and Dividing Ranges and the Dumaresq River to the MacIntyre River, thence downward to the 29th parallel of south latitude, and following that parallel westerly to the 141st meridian of east longitude, which is the eastern boundary of South Australia, together with all the adjacent islands, their members, and appurtenances in the Pacific Ocean. The area of the new colony thus constituted was 554,300 square miles. By this separation the remaining territory of New South Wales was divided into two parts, one of 310,372 square miles, of which 309,432 square miles constitute the present State of New South Wales, and 940 square miles the Federal Capital Territory. The other area comprised 710,040 square miles, of which 116,200 square miles form now a part of Queensland, 523,620 square miles form the Northern Territory, and 70,220 square miles form now a part of South Australia.

9. **The Colonies at the Close of 1859.**—Since the separation of Queensland, no other creation of colonies has taken place in Australia, though the boundaries of New South Wales, Queensland, and South Australia were altered later. The dates of foundation of the Australasian colonies, and their areas at the close of 1859, were therefore as hereunder :—

AUSTRALASIAN COLONIES AS AT THE CLOSE OF 1859.

Colony.	Date of Annexation.	Date of Creation.	Date of First Permanent Settlement.	Area—Square miles.
New South Wales	1770	1786	1788	1,020,412
Tasmania	1770	1825	1803	26,215
South Australia	1770	1834	1836	309,850
Victoria	1770	1851	1834	87,884
Queensland	1770	1859	1824	554,300
Western Australia	1827	1829	1829	975,920
New Zealand	1840	1841	1814	103,862 (*a*)

(*a*) Including outlying and annexed islands.

10. **The Changing Boundaries of the Colonies.**—When, on the 15th August, 1834, the Imperial Government constituted the province of South Australia, there lay between its western boundary and the eastern boundary of Western Australia (as proclaimed by Fremantle in 1829) a strip of country south of the 26th parallel of south latitude, and between the 132nd and 129th meridians of east longitude, legally included within the territory of New South Wales. The area of this territory, frequently but improperly referred to as "No Man's Land," has been calculated to cover approximately 70,220 square miles. On the 10th October, 1861, by the authority of the Imperial Act 24 and 25 Vic., cap. 44, the western boundary of South Australia was extended so as to cover this strip, and to coincide with the eastern boundary of Western Australia—the 129th meridian. By letters patent dated the 13th March, 1861, forwarded by the Colonial Secretary to the Governor of Queensland on the 12th April, 1862, the area of Queensland was increased by the annexation of "so much of the colony of New South Wales as lies to the northward of the 26th parallel of south latitude, and between the 141st and 138th meridians of east longitude, together with all and every the adjacent islands, their members, and appurtenances, in the Gulf of Carpentaria." The area of South Australia was therefore increased by 70,220 square miles, and became 380,070 square miles, while the area of Queensland increased by 116,200 square miles, became 670,500 square miles. Nearly two years after the accession of territory, viz., on the 6th July, 1863, the Northern Territory, containing 523,620 square miles—also formerly a part of New South Wales—was, by letters patent, brought under the jurisdiction of South Australia, which therefore

controlled an area of 903,690 square miles; whilst that of New South Wales was diminished by these additions to South Australia, and by the separation of the colonies of New Zealand, Victoria and Queensland, till its area became only 310,372 square miles. The territories of Tasmania, Western Australia, and the three other separated colonies with the exception of some minor islands added to Queensland, remain as originally fixed.

11. The Colonies in 1900.—From what has been said in the previous sub-section it will be seen that the immense area generally known as Australasia had by 1863 been divided into seven distinct colonies, the combined areas of which amounted to 3,078,443 square miles.

§ 4. Establishment of the Commonwealth of Australia.

1. General.—On the 1st January, 1901, the colonies mentioned, with the exception of New Zealand, were federated under the name of the "Commonwealth of Australia," the designation of "Colonies"—excepting in the case of the Northern Territory, to which the designation "Territory" is applied—being at the same time changed into that of "States." The total area of the Commonwealth of Australia is, therefore, 2,974,581 square miles. The dates of creation and the areas of its component parts, as determined on the final adjustment of their boundaries, are shown in the following table:—

THE COMMONWEALTH OF AUSTRALIA.—AREA, ETC., OF COMPONENT PARTS.

State.	Year of Formation into Separate Colony.	Present Area in Square Miles.	State.	Year of Formation into Separate Colony.	Present Area in Square Miles.
New South Wales(a)	1786	310,372(a)	Tasmania ..	1825	26,215
Victoria ..	1851	87,884	Northern Territory	1863	523,620
Queensland ..	1859	670,500			
South Australia ..	1834	380,070	(b)Area of the Commonwealth ..	..	2,974,581
Western Australia	1829	975,920			

(a) On the 1st January, 1911, the Federal Capital Territory embracing an area of 912 square miles was taken over by the Commonwealth from the State of New South Wales, and on 12th July, 1915, assent was given to an Act taking over a further area of 28 square miles at Jervis Bay; the area of that State therefore is now 309,432 square miles.

(b) The present Dominion of New Zealand became a separate colony in 1841. The addition of its area, 103,862 square miles, to the total shown in the table above, gives a total for Australasia of 3,078,443 square miles as referred to in § 3, 11.

2. Transfer of the Northern Territory to the Commonwealth.—On the 7th December, 1907, the Commonwealth and the State of South Australia entered into an agreement for the surrender to and acceptance by the Commonwealth of the Northern Territory, subject to approval by the Parliaments of the Commonwealth and the State. This approval was given by the South Australian Parliament under the Northern Territory Surrender Act 1907 (assented to on the 14th May, 1908), and by the Commonwealth Parliament under the Northern Territory Acceptance Act 1910 (assented to on the 16th November, 1910). The Territory accordingly was transferred to the Commonwealth by proclamation on the 1st January, 1911.

3. Transfer of the Federal Capital Territory to the Commonwealth.—On the 18th October, 1909, the Commonwealth and the State of New South Wales entered into an agreement for the surrender to and acceptance by the Commonwealth of an area of 912 square miles as the seat of Government of the Commonwealth. In December, 1909, Acts were passed by the Commonwealth and New South Wales Parliaments approving the agreement, and on the 5th December, 1910, a proclamation was issued vesting the Territory in the Commonwealth on and from the 1st January, 1911. By the Jervis Bay

Territory Acceptance Act 1915, which was assented to on 12th July, 1915, an area of 28 square miles at Jervis Bay, surrendered by New South Wales according to an agreement made in 1913, was accepted by the Commonwealth.

4. **Transfer of British New Guinea or Papua.**—Under the administration of the Commonwealth, but not included in it, is British New Guinea or *Papua*, finally annexed by the British Government in 1884. This territory was for a number of years administered by the Queensland Government, but was transferred to the Commonwealth by proclamation on the 1st September, 1906, under the authority of the Papua Act (Commonwealth) of 16th November, 1905. The area of Papua is about 90,540 square miles.

5. **Transfer of Norfolk Island.**—Although administered for many years by the Government of New South Wales, this island was, until 1st July, 1914, a separate Crown colony. On that date it was taken over by the Federal Parliament as a territory of the Commonwealth.

§ 5. The Exploration of Australia.

1. **Introduction.**—A fairly complete, though brief, account of the Exploration of Australia was given in Year Book No. 2 (pp 20 to 39). It is proposed to give here only a brief summary of the more important facts relating to the subject.

2. **Eastern Australia.**—(i) *General.* The first steps towards the exploration of New South Wales were taken by Captain Phillip and his officers, who, during 1788 and the years immediately following, made a number of excursions in the neighbourhood of Port Jackson, to Broken Bay, and along the Hawkesbury and Nepean Rivers.

(ii) *French Voyages of Exploration, 1788 to 1802.* Towards the close of the 18th century the French, who were supposed to covet territory in Australia, sent out several exploring expeditions. In 1788 two vessels under the command of Lapérouse put into Botany Bay to refit. In 1792 the French Admiral D'Entrecasteaux was in Australian waters with two vessels and discovered and named several places on the Tasmanian coasts. In 1800 an expedition, sent out by the French Republic, examined parts of the coasts of Van Diemen's Land and South Australia. It was chiefly in consequence of rumours to the effect that the French intended to establish a colony in Australia, that steps were taken by the British to form settlements at various places on the Australian coasts.

(iii) *Bass and Flinders, 1796 to 1803.* In 1796 and 1797 Bass and Flinders explored the coast in a southerly direction from Port Jackson as far as Western Port. In 1798 Bass, accompanied by Flinders and eight seamen, circumnavigated the island of Tasmania thus proving the existence of the strait which now bears his name. In 1801 Flinders again came to Australia in command of H.M.S. *Investigator*, which was the first vessel to completely circumnavigate the Australian continent.

(iv) *Discovery of Port Phillip, 1802.* On the 5th January, 1802, Lieutenant Murray, who had been sent out to trace the coast between Point Schanck and Cape Otway, sighted the entrance to Port Phillip, which, however, he did not enter, owing to stress of weather, until the 15th February. Shortly afterwards Flinders entered Port Phillip, and in 1803 Charles Robbins explored the Yarra for some miles above the present site of Melbourne.

(v) *The Blue Mountains Crossed, 1813.* In 1813 Gregory Blaxland succeeded in effecting a passage over the Blue Mountains, which had previously proved an impassable barrier to all attempts to extend the infant colony in a westerly direction. G. W. Evans, following on Blaxland's tracks, soon penetrated further inland and discovered and named the Fish, Campbell, Macquarie, and Lachlan Rivers. In 1817 and 1818 John Oxley, Allan Cunningham, Charles Frazer, and others explored a considerable part of the Lachlan and Macquarie Rivers, and discovered and named the Castlereagh River, the Arbuthnot Range, the Liverpool Plains, the Hastings River, and Port Macquarie.

(vi) *Hamilton Hume, 1814 to 1824.* In 1816 Hamilton Hume, who two years previously had explored the country round Berrima, discovered and named the Goulburn Plains and Lake Bathurst. In 1824, accompanied by William Hilton Hovell, Hume starting off from Lake George, reached the Murrumbidgee and sighted the Snowy Mountains. On the 16th December, 1824, he reached the Southern Ocean at the spot where Geelong now stands. This expedition had a great and immediate influence on the extension of Australian settlement.

(vii) *Allan Cunningham, 1817 to 1829.* In 1823 Cunningham, who had accompanied Oxley in 1817, discovered and named Pandora's Pass, leading to the Liverpool Plains from the Upper Hunter, and in 1827 he discovered the Darling Downs.

(viii) *Charles Sturt, 1828 to 1830.* In 1828 the Darling River was discovered by Sturt, who in the following year explored the Murray River, tracing it to its mouth at Lake Alexandrina in Encounter Bay. Sturt thus connected his overland journey with the discoveries of Flinders and other coastal explorers. In the meantime discovery on the Australian coasts had been followed up by Captains Wickham and Stokes in H.M.S. *Beagle*.

(ix) *Sir Thomas Mitchell, 1831 to 1846.* In 1831 Mitchell discovered the lower courses of the Peel (Namoi), Gwydir, and Dumaresq Rivers, and identified the Upper Darling. Two years later he explored the country between the Bogan and Macquarie Rivers, and in 1835 he traced the Darling 300 miles down from Bourke. In 1836 he ascended the Murray and Loddon Rivers and discovered the Avoca, the Campaspe, and the Wimmera Rivers, reaching the coast near Cape Northumberland. On his return journey Mitchell visited Portland Bay, where he found the Henty family established, and ascending Mount Macedon, he saw and identified Port Phillip. In 1845 and 1846 Mitchell again set out, accompanied by Edmund B. Kennedy, and explored the Narran, Balonne, and Culgoa Rivers. Ascending the Balonne, he turned westward, exploring the Maranoa and the Warrego. Proceeding to the north he then discovered the Belyando and the Barcoo Rivers.

(x) *McMillan, Strzelecki, Leslie and Russell, 1839 to 1841.* In the meantime other explorers had been in the field and had made numerous discoveries. In 1839 and 1840 Angus McMillan discovered and named Lake Victoria, the Nicholson, Mitchell, and Macallister Rivers, and explored the country as far as the Latrobe River. In 1840 Strzelecki discovered Mount Kosciusko, the Latrobe River, and Lake King. In 1840 and 1841 Patrick Leslie and Stuart Russell explored the Condamine River.

(xi) *Leichhardt, 1844 to 1845.* In 1844 and 1845 Ludwig Leichhardt made a number of discoveries. Leaving the Condamine River he discovered the Dawson River, Peak Downs, the Planet and Comet Rivers, and Zamia Creek. Later on he found and named the Mackenzie, Isaacs, Suttor, Burdekin, Lynd, Mitchell, Leichhardt, Nicholson, McArthur and Roper Rivers, and after exploring part of the coast of the Gulf of Carpentaria, reached the settlement of Victoria at Port Essington. In 1848 Leichhardt equipped another expedition and set out from the Cogoon. No sure clue as to his fate or as to the fate of his companions has ever come to light.

(xii) *Kennedy, 1847 to 1848.* In 1848 Edmund Kennedy, who had accompanied Mitchell in 1845 and 1846, and who had further explored the Barcoo and Victoria Rivers in 1847, attempted to make his way up the eastern coast of Cape York Peninsula After great hardships he reached the Escape River, where he was murdered by the blacks.

(xiii) *A. C. Gregory, 1846 to 1858.* A. C. Gregory's earliest explorations were in Western Australia, where in 1846 he discovered Lake Moore. In 1855 Gregory explored the Fitzmaurice and Victoria Rivers and Sturt's Creek. He examined the Gilbert River and its tributaries, and made his way in a westerly direction across to Brisbane. In 1858 Gregory explored the districts near the Barcoo and Thompson Rivers, Strzelecki's Creek and Lake Blanche.

(xiv) *Later Exploration of the North East, 1859 to 1872.* After Kennedy's ill-fated expedition the main portion of Eastern Australia was fairly well known. Certain parts of what is now Queensland, however, still remained unexplored. These were examined by G. E. Dalrymple in 1859, by Frederick Walker in 1862, by Frank and Alex. Jardine in 1864, and by William Hann in 1872. Hann discovered the Tate, Walsh, Palmer and Normanby Rivers. This expedition practically completed the exploration of Eastern Australia. The gold discoveries on the Palmer River in Queensland, following soon after, led to a considerable amount of minor exploration being carried out by prospectors whose labours, are, however, unrecorded.

3. Central Australia.—(i) *General.* In 1836 Colonel Light surveyed the shores of St. Vincent's Gulf, and selected the site for the settlement of Adelaide. In the same year Mitchell had succeeded in travelling overland from the Darling to Cape Northumberland, and the settlers found little difficulty in driving stock from various parts of New South Wales to the new country. A great deal of minor exploration was done by these pioneers, the first of whom to lead the way across to the Port Phillip settlement with sheep in 1837 was Charles Bonney. In 1838 the overlanding of stock was extended to Adelaide by Joseph Hawdon.

(ii) *Eyre, 1838 to 1841.* In 1841 Edward John Eyre, who had previously discovered Lake Hindmarsh, and had explored the country to the north-east of Spencer's Gulf, succeeded, after great hardship, in reaching Albany overland from Adelaide. After this expedition settlers soon spread in a northerly direction from Adelaide, and various expeditions in search of grazing country were carried out by these pioneers.

(iii) *Sturt's Later Explorations, 1844 to 1845.* In 1844 Charles Sturt, whose explorations in Eastern Australia have already been referred to, set out from the Darling on an expedition to reach the centre of the continent. He reached his furthest point in latitude 24° 30′ S. and longitude 137° 58′ E. in September, 1845, and, after enduring great privations, was compelled to retreat through want of water.

(iv) *Stuart, 1858 to 1862.* John MacDouall Stuart accompanied Captain Sturt on his last expedition. After minor explorations in the vicinity of Lake Eyre, Stuart made an unsuccessful attempt to cross the continent from south to north in 1860. After discovering the Frew, Finke, and Stevenson Creeks, Chambers Pillar, and the McDonnell Range, he camped at the centre of Australia on the 22nd April, 1860. In the following year Stuart was placed in command of an expedition equipped by the South Australian Government, and succeeded in crossing the continent, reaching the sea at Chambers Bay on the 25th July, 1862.

(v) *Burke and Wills Expedition, 1860 to 1861.* In 1860 Robert O'Hara Burke and William Wills led an expedition northward from Melbourne to explore the country as far as the Gulf of Carpentaria. Through their arrangements having miscarried, both Burke and Wills perished in the bush, after having crossed the continent and returned to their depot at Fort Wills, only to find it deserted. Various relief expeditions were sent out, and among them may be specially mentioned Howitt's Relief Expedition, the Queensland Relief Expeditions under Walker and Landsborough, and the South Australian Relief Party under McKinlay. Though the actual work of exploration carried out by the Burke and Wills expedition was unimportant, the discoveries made by the relief parties sent out were of great value in opening up Central Australia.

(vi) *Giles, 1872 to 1876.* In 1872 Ernest Giles discovered Lake Amadeus and Mount Olga. In that year and in the following one he made unsuccessful attempts to force his way through the desert to the settlements of Western Australia. In 1875 Giles, accompanied by W. H. Tietkins, set out from Beltana, and after making his way in the vicinity of latitude 30° S., to the settled districts of Western Australia, returned to the Peake telegraph station by way of the Murchison, Gascoyne, and Ashburton Rivers.

(vii) *Later Explorations.* Other explorations in Central Australia were carried out by Major Warburton (1873), W. C. Grosse (1873), W. O. Hodgkinson (1875), A. Johns and P. Saunders (1876), H. V. Barclay (1877), Nathaniel Buchanan (1878), Frank Scarr (1878), Ernest Favenc (1878–83), David Lindsay (1883), H. Stockdale (1884), W. H. Tietkins (1889), A. Searcy (1882–96), and Hubbe (1896).

4. Western Australia.—(i) *General.* In 1791 George Vancouver, in command of H.M.S. *Discovery*, reached and named King George's Sound. On the 26th December, 1826, Major Lockyer, with a detachment of soldiers, landed at King George's Sound to form a settlement, under instructions from Sir Ralph Darling, then Governor of New South Wales. The settlement was established in order to forestall the French, who, it was rumoured, intended to occupy the harbour. [As stated on page 5 *ante*, the assertion of British dominion throughout the continent dates from the hoisting of the British flag at this locality on the 26th December, 1826]. Early in 1827 Captain James Stirling and Charles Frazer examined and reported upon the Swan River district with a view to forming a settlement there. In 1829 Captain Fremantle landed at the mouth of the Swan River and took possession of the country. A month later Stirling arrived with the first settlers.

(ii) *Early Explorers.* In November, 1829, Alexander Collie and Lieutenant Preston explored the coast between Cockburn Sound and Géographe Bay, and in the following month Dr. T. B. Wilson, R.N., discovered and named the Denmark River.

In 1830 John Septimus Roe explored the country in the neighbourhood of Cape Naturaliste and between the Collie and Preston Rivers, and in 1835 examined the districts between the headwaters of the Kalgan and Hay Rivers. In 1836 and 1839 Roe explored the country north and east of Perth, and in 1848 traced the course of the Pallinup River for some distance.

Other early explorers in the West were Ensign R. Dale (1830), Captain Bannister (1831), W. K. Shenton (1831), J. G. Bussell (1831), Lieutenant Preston (1831), Alexander Collie (1832), F. Whitfield (1833), A. Hillman (1833), G. F. Moore (1834), and Lieutenant Bunbury (1836).

(iii) *Grey, 1837 to 1839.* In 1837 Captain (afterwards Sir) George Grey discovered and traced the Glenelg River. In 1839 he explored the country between the Williams and Leschenault Rivers, and later succeeded in making his way along the coast from the mouth of the Gascoyne River to Perth.

(iv) *F. T. Gregory, 1857 to 1861.* In 1857 and 1858 Frank T. Gregory examined the upper reaches of the Murchison River and reached the Gascoyne River, which he descended to its mouth, whence he made his way to Perth. In 1861 Gregory explored the north-western districts, discovering the Fortescue, Ashburton, Shaw, De Grey, and Oakover Rivers.

(v) *H. M. Lefroy, 1863.* In 1863 Henry Maxwell Lefroy led a party from York, and after discovering Mt. Burges, traversed the Coolgardie, Kalgoorlie and Boulder areas, reaching a point about 21 miles east-south-east of Boulder.

(vi) *John Forrest, 1869 to 1883.* In 1869, John Forrest (later Lord Forrest of Bunbury) penetrated to the east some distance past Mount Margaret and discovered Lake Barlee. In 1870 he succeeded in making his way from Perth to Adelaide via Esperance Bay, Israelite Bay, and Eucla, and in 1874, accompanied by his brother Alexander and four others, he crossed from Geraldton to the overland telegraph line near Peake Station. In 1883 Forrest explored a large portion of the Kimberley Division, Cambridge Gulf, and the lower part of the Ord River.

(vii) *Alexander Forrest, 1871 to 1879.* In 1879 Alexander Forrest, who had previously accompanied his brother on two expeditions, made his way from the De Grey River to the Daly Waters Station on the overland telegraph line, via Beagle Bay, the King Leopold Range, Nicholson Plains, and the Ord and Victoria Rivers.

(viii) *L. A. Wells, 1892 to 1897.* In 1892 Wells examined practically the whole of the still unexplored districts between Giles' track of 1876 and Forrest's route of 1874, and in 1896 and 1897 he explored the country between the East Murchison and Fitzroy Rivers.

(ix) *Later Explorations in Western Australia.* During the latter part of the 19th century various expeditions were sent out to explore those parts of Western Australia (chiefly in the north-western districts) which still remained unknown. Those whose names are connected with the later exploration of Western Australia are—David Carnegie (1896–7) who discovered a practical stock route between Kimberley and Coolgardie; W. Carr-Boyd (1883–96), who explored the country near the Rawlinson Ranges and made several excursions between the southern goldfields of Western Australia and the South Australian border; H. F. Johnston, G. R. Turner, and E. T. Hardman (1884), who discovered the Mary and Elvire Rivers; F. S. Brockman, Charles Crossland, Gibb Maitland, and Dr. F. M. House (1901), who explored the extreme north of the State; F. H. Hann (1896–1907), who made various excursions in the north-west and between Laverton and Oodnadatta.

(x) *Other Explorers.* Other explorers whose names are connected with the exploration of Western Australia are—George Eliot, who, in 1839, explored the country between the Williams and Leschenault; William Nairne Clark, who, in 1841, discovered immense jarrah and karri forests in the south-west; R. H. Bland (1842); H. Landor (1842); Lieutenant Helpmann (1844); Captain H. M. Denham (1858); B. D. Clarkson, C. E. and A. Dempster, and C. Harper (1861); C. C. Hunt and Ridley (1863); R. J. and T. C. Sholl (1865); A. McRae (1866); Philip Saunders and Adam Johns (1876); H. Stockdale (1884); H. Anstey (1887); F. Newman and W. P. Goddard (1890); J. H. Rowe (1895); C. A. Burrows and A. Mason (1896); Hugh Russell (1897); and John Muir (1901).

§ 6. The Constitutions of the States.

1. **Introduction.**—The subject of "General Government" is dealt with in some detail in Chapter III., but it has been thought desirable to give here a summary of the chief events in the constitutional history of Australia. More extended reference will be found in previous Year Books.

2. **Early Constitutional History.**—(i) *General.* The earliest statute relating to Australia was passed in the year 1784, and empowered the King in Council to appoint places in Australia to which convicts might be transported. On the 6th of December, 1786, His Majesty's "territory of New South Wales, situated on the east part of New Holland," was appointed such a place.

(ii) *The First Constitutional Charter.* In 1823 an Act was passed authorizing the creation of a Council, charged with certain legislative powers of a limited character. This charter was amended by an Act passed in 1828, and applied both to New South Wales and to Van Diemen's Land.

(iii) *First Representative Legislature.* In 1842 the Imperial Government established in New South Wales a Legislative Council consisting of thirty-six members, twelve of whom were to be nominated by the Sovereign and twenty-four elected by the inhabitants of the colony.

(iv) *The Australian Colonies Government Act 1850.* The two main objects of this Act were (*a*) the separation of the Port Phillip District from New South Wales, and (*b*) the establishment of an improved system of government in all the Australian colonies. Power was given to the Governor and Legislative Council in each colony to alter the qualifications of electors and members as fixed by the Act, or to establish, instead of the Legislative Council, a Council and a House of Representatives, or other separate Legislative Houses, and to vest in such Houses the powers and functions of the old Council.

3. **New South Wales.**—After the Act just referred to had been proclaimed, an Electoral Bill for New South Wales was passed, increasing the number of members of the Council from thirty-six to fifty-four. In 1851 a remonstrance was despatched by the Legislative Council to the Secretary of State for the Colonies, objecting to the form of Constitution which the Imperial authorities proposed to grant under the Act of 1850. In 1852 the Secretary of State for the Colonies suggested that the Legislative Council should proceed to frame a Constitution resembling that of Canada and based on a bi-cameral Legislature. A new Constitution was, on the 21st December, 1853, adopted by the Council and transmitted to the Secretary of State for the Colonies. With some amendments this Bill became law on the 16th July, 1855. It is now known as the New South Wales Constitution Act 1855, and under its provisions a fully responsible system of government was granted. The first Parliament, under the new Constitution was opened on the 22nd May, 1856. The Constitution was amended by Acts passed in 1857, 1884, and 1890, these Acts being repealed and consolidated by the Constitution Amendment Act of 1902. The last amending Act was passed in 1926.

4. **Victoria.**—After the proclamation of the Australian Colonies Government Act of 1850, the old Legislative Council of New South Wales met on the 28th March, 1851, and passed two Acts specially concerning Victoria. The first provided for the continuation of the powers and functions of all public officers resident within the Port Phillip District until removed or reappointed by the Government of Victoria. The other Act provided that the Legislative Council of Victoria should consist of thirty members, ten nominee and twenty elective, with powers and functions similar to those of the reorganized Legislative Council of New South Wales. A Constitution was drafted by a committee of the Legislative Council, and was embodied in a Bill which was passed and reserved for the Queen's assent on 28th March, 1854. The Enabling Bill was passed

and assented to on the 16th July, 1855, and the new Constitution was proclaimed on the 23rd November following. Several amendments have since been made, the last amending Act having been passed in 1926.

5. **Queensland.**—As part of New South Wales, the Moreton Bay District enjoyed the benefits of responsible government under the Constitution Act of 1855.

By the New South Wales Constitution Act 1855 the power granted to the Queen in 1842 to alter the northern boundary of New South Wales was preserved, and Her Majesty was authorized, by letters patent, to erect into a separate colony any territory which might be so separated. The separation was effected by letters patent dated the 6th June, 1859, and the Constitution of the new colony was embodied in an Order in Council of the same date.

The Order in Council provided that there should be within the colony of Queensland a Legislative Council and a Legislative Assembly, The first Parliament under the new Constitution was convened on the 29th May, 1859. By the Constitution Amendment Act of 1922 the Legislative Council was abolished. The last amendment of the Constitution was enacted in 1926.

6. **South Australia.**—In the exercise of the provisions of the Act by which the Province was created, a governor, a judge, seven commissioners, and other officials were appointed. Under an Act passed in 1842 the system of government was remodelled; the colonization commissioners were abolished, and the Province became a Crown colony with a nominated Legislative Council.

In 1855 a new Legislative Council passed a Bill to create a bi-cameral Legislature, which received the Royal assent in 1856. This Act, known as the South Australian Constitution Act 1856, confers no legislative powers except by reference to the Act of 1850. The first session of the new Parliament commenced on the 22nd April, 1857. There has been a large number of amendments to the Constitution, the latest having been passed in 1926.

7. **Western Australia.**—By an Order in Council dated the 1st November, 1830, the first Executive Council was constituted, while in the following year a Legislative Council, which consisted at first solely of members of the Executive Council, was formed. In August, 1870, writs were issued for the election of a Council to consist of twelve elected and six nominated members. These members were altered from time to time. In 1889 the Legislative Council was dissolved, and a general election took place, the principal question being the introduction of responsible government. A Constitution providing for the creation of a bi-cameral Legislature was drafted, and responsible government was proclaimed in the colony on the 21st October, 1890. The first Parliament under the new Consititution met on the 30th December, 1890. On the 18th July, 1893, the Legislature of Western Australia passed an Act to amend the Constitution, abolishing the nominee Council, and substituting one elected by the qualified inhabitants of the colony. Amendments have been made by various Acts, the last of which was passed in 1927.

8. **Tasmania.**—Under an Order in Council dated the 14th June, 1825, and made in pursuance of the provisions of an Act passed in 1823, Van Diemen's Land, as it was officially known until the year 1853, was separated from New South Wales and was proclaimed a separate colony, with a Lieutenant Governor, an Executive, and a Legislative Council. It was not until the Imperial Act of 1850 was passed, that a system of representative government was introduced. A Constitution Bill was drafted and passed by the Legislative Council, and was assented to and proclaimed on the 24th October, 1856.

The first Parliament under the new Constitution was opened on the 2nd December, 1856. The Constitution has been amended by various Acts, the latest of which was passed in 1926.

9. **Reservation of Bills.**—The reservation of Bills passed by the Legislature of any State is dealt with under the provisions of the Australian States Constitution Act 1907, a short outline of the provisions of which will be found in Official Year Book, No. 18, p. 17.

§ 7. The Federal Movement in Australia.

1. Early Stages in the Federal Movement.—A summary is given in Year Book No. 1 (pp. 17 to 21) of the "Federal Movement in Australia" from its inception to its consummation. Limits of space will permit of the insertion of a synopsis only in the present issue.

Owing to the circumstances of their growth, the initial tendency in Australia was naturally towards the individualistic evolution of the several settlements, yet from the earliest period there was a clear recognition of the importance of intercolonial reciprocity. Governor Fitzroy, in 1846, and Earl Grey, in 1847, saw that there were questions which affected "Australia collectively, the regulation of which in some uniform manner, and by some single authority, may be essential to the welfare of them all," and a "central legislative authority for the whole of the Australian colonies" was actually contemplated. Even so far back as 1849, a Privy Council Committee recommended a uniform tariff, and the constituting of one of the Governors as Governor-General of Australia, Sir Charles Fitzroy being actually appointed as "Governor-General of all Her Majesty's Australian Possessions." The office, however, was nominal rather than actual and expired in 1861. Dr. Lang's idea of "a great federation of all the colonies of Australia" was put forward in 1852, and a Victorian committee in 1853 advocated the value of a General Assembly of Delegates for the whole of Australia.

The need of union was urged by the *Sydney Morning Herald* in 1854, and, although Wentworth sought in 1857 to bring about the creation of a Federal Assembly, a draft "Enabling Bill" proved unacceptable to Her Majesty's Government. In the same year Mr. (afterwards Sir) Charles Gavan Duffy secured the appointment of a select committee of the Victorian Legislative Assembly to consider the necessity of a federal union of the Australasian colonies. The need for such a union was unanimously affirmed, the general opinion being that it should not be longer delayed. In the same year, a select committee of the New South Wales Legislative Council also considered this question, fully recognizing that antagonisms and jealousies were likely to arise through delay.

Union was in a fair way towards realization when the advent of the Cowper Administration destroyed all chance of attaining it, owing to the antagonism of Mr. Cowper and Mr. (afterwards Sir) James Martin. South Australia, also in the same year, and Queensland in 1859, were both unfavourable to the federal scheme. A second attempt by Mr. Duffy to bring about a conference in 1860 failed also.

Tariff differences, however, compelled political attention to the matter, and in 1862 correspondence was opened up by South Australia regarding tariff uniformity. By means of intercolonial conferences between 1863 and 1880 some degree of uniformity in legislation and a measure of concerted administration were realized. In March, 1867, Mr. (afterwards Sir) Henry Parkes expressed himself as follows:—" . . . The time has arrived when these colonies should be united by some federal bond. . . . There are questions projecting themselves . . . which cannot be dealt with by . . . individual Governments. . . . I believe it will lead to a permanent federal understanding."

2. The Federal Council.—The conference of November-December, 1880, and January, 1881, recommended the creation of a Federal Council, believing that the time had not arrived for a Federal Constitution with a Federal Parliament. Until 1883, however, every effort proved abortive, but in November of that year a convention, at which the seven colonies and Fiji were represented, met in Sydney. A Bill to establish a Federal Council for Australasia, drafted by Mr. (later Sir) Samuel Griffith, was, after some modification by a committee of the convention, adopted. In July and August, 1884, the Crown was addressed, praying for the enactment of a Federal Council Act. New South Wales and New Zealand, however, held aloof, the view of Sir Henry Parkes being that a "Council" would impede the way for a sure and solid federation. The Bill introduced by the Earl of Derby in the House of Lords on the 23rd April, 1885, became law on the 14th August as "The Federal Council of Australasia Act 1885." The Council's career however, soon showed that it could not hope to be effective, and it met for the last time in January, 1899.

3. Formative Stages of the Federal Movement.—As early as 1878 the necessity for federal defence was vividly brought into Australian consciousness, and arrangements for naval protection were entered into with the Imperial Government. These were ratified by the Australasian Naval Force Act. Queensland, however, did not come into line until 1891.

Early in 1889, Sir Henry Parkes had confidently suggested to Mr. Duncan Gillies the necessity for a Federal Parliament and Executive. Unable to accept the latter's suggestion that New South Wales should give its adhesion to the Federal Council, the former statesman urged the institution of "a National Convention for the purpose of devising and reporting upon an adequate scheme of Federal Government." This led to the Melbourne Conference of 6th February, 1890. It was at the banquet of this occasion that, in proposing "A United Australasia," Mr. James Service pointed out that the tariff question was "a lion in the path," which federationists must either slay, or by which they must be slain; in the reply to which Sir Henry Parkes made use of his historic phrase, *the crimson thread of kinship runs through us all.* Certain elements of doubt being expressed as to the motives underlying the movement, Sir Henry Parkes said:—"We desire to enter upon this work of Federation without making any condition to the advantage of ourselves, without any stipulation whatever, with a perfect preparedness to leave the proposed convention free to devise its own scheme, and, if a central Parliament comes into existence, with a perfect reliance upon its justice, upon its wisdom, and upon its honour . . . I think . . . an overwhelming majority of my countrymen . . . will approve of the grand step . . . uniting all the colonies under one form of beneficent government, and under one national flag."

The first National Australasian Convention, under Sir Henry Parkes' presidency was convened on the 2nd March, 1891, all the Australian colonies and New Zealand being represented. The Bill then drafted was considered by the Parliaments of New South Wales, Victoria, South Australia, and Tasmania, but not by those of Queensland, Western Australia, and New Zealand, and though the parliamentary process of dealing with the matter failed, federal sentiment was strengthening. The collapse of the "land boom" had made apparent how intimately the interests of the several colonies were related. and the dangers of disunion became impressively obvious. The Australian Natives' Association took up the federal cause with enthusiasm. Federation leagues were established, the issues were widely and intelligently discussed. The unification scheme of Sir George Dibbs helped to make the issue a real one.

At the Conference of Premiers at Hobart on the 29th January, 1895, it was agreed that Federation "was the great and pressing question of Australian politics," and that "the framing of a Federal Constitution" was an urgent duty. The resuscitation of the whole matter led to the passing of Enabling Acts. In New South Wales, the Act received the Royal assent on the 23rd December, 1895; South Australia anticipated this by three days; the Tasmanian Bill was passed on the 10th January, 1896, the Victorian on the 7th March, 1896; Western Australia fell into line on the 27th October. The "People's Federal Convention," held at Bathurst, N.S.W., in November, 1896, gave a considerable impulse to the movement; to wait longer for Queensland was considered unnecessary, and the 4th March, 1897, was fixed as the date for the election of federal representatives for New South Wales, Victoria, South Australia, and Tasmania. Western Australia followed suit, and on the 22nd March the representatives met at Adelaide.

The discussions made it evident that the federal point of view had advanced considerably. Constitutional, Finance, and Judiciary Committees were appointed, and a Bill was drafted. This, reported to the Convention on the 22nd April, was adopted on the following day, and the Convention adjourned till September. The Parliaments of New South Wales, Victoria, South Australia, Tasmania, and Western Australia discussed the question before the Sydney Session of the Convention, which opened on the 2nd September, 1897. The business of the Convention involved the general reconsideration of the whole Bill, and the consideration of no less than 286 suggested amendments. This work gave a definite character to that of the Melbourne Session of 1898, extending from the 20th January to the 17th March, the necessity for reaching a final decision giving to its deliberations corresponding weight.

4. Votes on the Question of Federation.—Eleven weeks after this last convention the first popular vote was taken on Federation in New South Wales, Victoria, South Australia, and Tasmania. Though the decision was overwhelmingly in favour of Federation in three of the States, and there was a distinct majority in its favour in New South Wales, the majority was legally insufficient. On the 22nd January, 1899, the Premiers of the six colonies met at Melbourne in a conference initiated by the Right Honourable G. H. Reid, P.C., and seven amendments were made in the Bill. This step virtually effected the solution of the few outstanding difficulties which could in any way be regarded as fundamental.

On the occasion of the second popular vote, Queensland also joined in, and the general majority in favour of Federation was more than doubled, that for New South Wales itself having been more than quadrupled when compared with the first vote. The following table shows the two results :—

VOTES FOR AND AGAINST FEDERATION.

Votes.		N.S.W.	Victoria.	Sth. Aust.	Tas.	Qld.	TOTALS.
1st Vote	For Federation ..	71,595	100,520	35,800	11,797	—	219,712
	Against ,, ..	66,228	22,099	17,320	2,716	—	108,363
	Majority ..	5,367	78,421	18,480	9,081	—	111,349
2nd Vote	For Federation ..	107,420	152,653	65,990	13,437	38,488	377,988
	Against ,, ..	82,741	9,805	17,053	791	30,996	141,386
	Majority ..	24,679	142,848	48,937	12,646	7,492	236,602

5. Enactment of the Constitution.—The Secretary of State for the Colonies (the Right Honourable Joseph Chamberlain) expressed the hope on the 22nd December, 1899, that a delegation of the federating colonies would visit England on the occasion of the submission of the Commonwealth Bill to the Imperial Parliament. The delegation consisted of Mr. (later Sir) Edmund Barton (N.S.W.), Mr. Alfred Deakin (Vic.), Mr. C. C. Kingston (S.A.), Sir P. O. Fysh (Tas.), and later Mr. S. H. Parker was appointed delegate for Western Australia, and Mr. W. P. Reeves for New Zealand. After discussion as to whether there should be some modification in the Bill, it was introduced into the House of Commons on the 14th May ; the second reading was moved on the 21st of the same month ; the discussion in committee commenced on the 18th June ; and the Royal assent was given on the 9th July, 1900.

On the 31st July a referendum in Western Australia on the question of federating gave the result :—For, 44,800 ; against, 19,691 ; that is to say, a majority of 25,109 in favour of union. On the 21st August both Houses of Parliament in that State passed addresses praying that it might be included as an original State of the Commonwealth.

On the 17th September, 1900, Her Majesty Queen Victoria signed the proclamation declaring that on and after the first day of January, 1901, the people of New South Wales, Victoria, South Australia, Queensland, Tasmania, and Western Australia should be united in a Federal Commonwealth, under the name of the Commonwealth of Australia.

§ 8. Creation of the Commonwealth.

1. The Constitution Act.—The Commonwealth of Australia Constitution Act, 63 and 64 Vict., Chapter 12, namely, " An Act to constitute the Commonwealth of Australia," as amended by the Constitution Alteration (Senate Elections) Act 1906, and the Constitution Alteration (State Debts) Act 1909 is given *in extenso* hereunder.

THE COMMONWEALTH OF AUSTRALIA CONSTITUTION ACT,
63 & 64 VICT., CHAPTER. 12.

An Act to constitute the Commonwealth of Australia. [*9th July,* 1900.]

WHEREAS the people of New South Wales, Victoria, South Australia, Queensland, and Tasmania, humbly relying on the blessing of Almighty God, have agreed to unite in one indissoluble Federal Commonwealth under the Crown of the United Kingdom of Great Britain and Ireland, and under the Constitution hereby established:

And whereas it is expedient to provide for the admission into the Commonwealth of other Australasian Colonies and possessions of the Queen :

Be it therefore enacted by the Queen's Most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows :—

1. This Act may be cited as the Commonwealth of Australia Constitution Act.

2. The provisions of this Act referring to the Queen shall extend to Her Majesty's heirs and successors in the sovereignty of the United Kingdom.

3. It shall be lawful for the Queen, with the advice of the Privy Council, to declare by proclamation that, on and after a day therein appointed, not being later than one year after the passing of this Act, the people of New South Wales, Victoria, South Australia, Queensland, and Tasmania, and also, if Her Majesty is satisfied that the people of Western Australia have agreed thereto, of Western Australia, shall be united in a Federal Commonwealth under the name of the Commonwealth of Australia. But the Queen may, at any time after the proclamation, appoint a Governor-General for the Commonwealth.

4. The Commonwealth shall be established, and the Constitution of the Commonwealth shall take effect, on and after the day so appointed. But the Parliaments of the several colonies, may, at any time after the passing of this Act make any such laws, to come into operation on the day so appointed, as they might have made if the Constitution had taken effect at the passing of this Act.

5. This Act, and all laws made by the Parliament of the Commonwealth under the Constitution, shall be binding on the courts, judges, and people of every State and of every part of the Commonwealth, notwithstanding anything in the laws of any State; and the laws of the Commonwealth shall be in force on all British ships, the Queen's ships of war excepted, whose first port of clearance and whose port of destination are in the Commonwealth.

6. "The Commonwealth" shall mean the Commonwealth of Australia as established under this Act.

"The States" shall mean such of the colonies of New South Wales, New Zealand, Queensland, Tasmania, Victoria, Western Australia, and South Australia, including the northern territory of South Australia, as for the time being are parts of the Commonwealth, and such colonies or territories as may be admitted into or established by the Commonwealth as States: and each of such parts of the Commonwealth shall be called "a State."

"Original States" shall mean such States as are parts of the Commonwealth at its establishment.

7. The Federal Council of Australasia Act, 1885, is hereby repealed, but so as not to affect any laws passed by the Federal Council of Australasia and in force at the establishment of the Commonwealth.

Any such law may be repealed as to any State by the Parliament of the Commonwealth, or as to any colony not being a State by the Parliament thereof.

8. After the passing of this Act the Colonial Boundaries Act 1895 shall not apply to any colony which becomes a State of the Commonwealth; but the Commonwealth shall be taken to be a self-governing colony for the purposes of that Act.

9. The Constitution of the Commonwealth shall be as follows :—

THE CONSTITUTION.

This Constitution is divided as follows :—

Chapter I.—The Parliament :
  Part I.—General :
  Part II.—The Senate :
  Part III.—The House of Representatives :
  Part IV.—Both Houses of the Parliament :
  Part V.—Powers of the Parliament :
Chapter II.—The Executive Government :
Chapter III.—The Judicature :
Chapter IV.—Finance and Trade :
Chapter V.—The States :
Chapter VI.—New States :
Chapter VII.—Miscellaneous :
Chapter VIII.—Alteration of the Constitution.
The Schedule.

CHAPTER I.—THE PARLIAMENT.

PART I.—GENERAL.

1. The legislative power of the Commonwealth shall be vested in a Federal Parliament which shall consist of the Queen, a Senate, and a House of Representatives, and which is hereinafter called "The Parliament," or "The Parliament of the Commonwealth."

2. A Governor-General appointed by the Queen shall be Her Majesty's representative in the Commonwealth, and shall have and may exercise in the Commonwealth during the Queen's pleasure, but subject to this Constitution, such powers and functions of the Queen as Her Majesty may be pleased to assign to him.

3. There shall be payable to the Queen out of the Consolidated Revenue Fund of the Commonwealth, for the salary of the Governor-General, an annual sum which, until the Parliament otherwise provides, shall be ten thousand pounds.

The salary of a Governor-General shall not be altered during his continuance in office.

4. The provisions of this Constitution relating to the Governor-General extend and apply to the Governor-General for the time being, or such person as the Queen may appoint to administer the Government of the Commonwealth; but no such person shall be entitled to receive any salary from the Commonwealth in respect of any other office during his administration of the Government of the Commonwealth.

5. The Governor-General may appoint such times for holding the sessions of the Parliament as he thinks fit, and may also from time to time, by Proclamation or otherwise, prorogue the Parliament, and may in like manner dissolve the House of Representatives.

After any general election the Parliament shall be summoned to meet not later than thirty days after the day appointed for the return of the writs.

The Parliament shall be summoned to meet not later than six months after the establishment of the Commonwealth.

6. There shall be a session of the Parliament once at least in every year, so that twelve months shall not intervene between the last sitting of the Parliament in one session and its first sitting in the next session.

PART II.—THE SENATE.

7. The Senate shall be composed of senators for each State, directly chosen by the people of the State, voting, until the Parliament otherwise provides, as one electorate.

But until the Parliament of the Commonwealth otherwise provides, the Parliament of the State of Queensland, if that State be an Original State, may make laws dividing the State into divisions and determining the number of senators to be chosen for each division, and in the absence of such provision the State shall be one electorate.

Until the Parliament otherwise provides there shall be six senators for each Original State. The Parliament may make laws increasing or diminishing the number of senators for each State, but so that equal representation of the several Original States shall be maintained and that no Original State shall have less than six senators.

The senators shall be chosen for a term of six years, and the names of the senators chosen for each State shall be certified by the Governor to the Governor-General.

8. The qualification of electors of senators shall be in each State that which is prescribed by this Constitution, or by the Parliament, as the qualification for electors of members of the House of Representatives; but in the choosing of senators each elector shall vote only once.

9. The Parliament of the Commonwealth may make laws prescribing the method of choosing senators, but so that the method shall be uniform for all the States. Subject to any such law, the Parliament of each State may make laws prescribing the method of choosing the senators for that State.

The Parliament of a State may make laws for determining the times and places of elections of senators for the State.

10. Until the Parliament otherwise provides, but subject to this Constitution, the laws in force in each State, for the time being, relating to elections for the more numerous House of the Parliament of the State shall, as nearly as practicable, apply to elections of senators for the State.

11. The Senate may proceed to the despatch of business, notwithstanding the failure of any State to provide for its representation in the Senate.

12. The Governor of any State may cause writs to be issued for elections of senators for the State. In case of the dissolution of the Senate the writs shall be issued within ten days from the proclamation of such dissolution.

13. As soon as may be after the Senate first meets, and after each first meeting of the Senate following a dissolution thereof, the Senate shall divide the senators chosen for each State into two classes, as nearly equal in number as practicable; and the places of the senators of the first class shall become vacant at the expiration of [the third year] *three years,** and the places of those of the second class at the expiration of [the sixth year] *six years,** from the beginning of their term of service; and afterwards the places of senators shall become vacant at the expiration of six years from the beginning of their term of service.

The election to fill vacant places shall be made [in the year at the expiration of which] *within one year before** the places are to become vacant.

For the purposes of this section the term of service of a senator shall be taken to begin on the first day of [January] *July** following the day of his election, except in the cases of the first election and of the election next after any dissolution of the Senate, when it shall be taken to begin on the first day of [January] *July** preceding the day of his election.

14. Whenever the number of senators for a State is increased or diminished, the Parliament of the Commonwealth may make such provision for the vacating of the places of senators for the State as it deems necessary to maintain regularity in the rotation.

15. If the place of a senator becomes vacant before the expiration of his term of service, the Houses of Parliament of the State for which he was chosen shall, sitting and voting together, choose a person to hold the place until the expiration of the term, or until the election of a successor as hereinafter provided, whichever first happens. But if the Houses of Parliament of the State are not in session at the time when the vacancy is notified, the Governor of the State, with the advice of the Executive Council thereof, may appoint a person to hold the place until the expiration of fourteen days after the beginning of the next session of the Parliament of the State, or until the election of a successor, whichever first happens.

At the next general election of members of the House of Representatives, or at the next election of senators for the State, whichever first happens, a successor shall, if the term has not then expired, be chosen to hold the place from the date of his election until the expiration of the term.

The name of any senator so chosen or appointed shall be certified by the Governor of the State to the Governor-General.

16. The qualifications of a senator shall be the same as those of a member of the House of Representatives.

17. The Senate shall, before proceeding to the despatch of any other business, choose a senator to be the President of the Senate; and as often as the office of President becomes vacant the Senate shall again choose a senator to be the President.

The President shall cease to hold his office if he ceases to be a senator. He may be removed from office by a vote of the Senate, or he may resign his office or his seat by writing addressed to the Governor-General.

18. Before or during any absence of the President, the Senate may choose a senator to perform his duties in his absence.

19. A senator may, by writing addressed to the President, or to the Governor-General if there is no President or if the President is absent from the Commonwealth, resign his place, which thereupon shall become vacant.

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* As amended by section 2 of the Constitution Alteration (Senate Elections) 1906. The words in square brackets have been repealed; amendments are shown in italics.

20. The place of a senator shall become vacant if for two consecutive months of any session of the Parliament he, without the permission of the Senate, fails to attend the Senate.

21. Whenever a vacancy happens in the Senate, the President, or if there is no President or if the President is absent from the Commonwealth, the Governor-General, shall notify the same to the Governor of the State in the representation of which the vacancy has happened.

22. Until the Parliament otherwise provides, the presence of at least one-third of the whole number of the senators shall be necessary to constitute a meeting of the Senate for the exercise of its powers.

23. Questions arising in the Senate shall be determined by a majority of votes, and each senator shall have one vote. The President shall in all cases be entitled to a vote; and when the votes are equal the question shall pass in the negative.

PART III.—THE HOUSE OF REPRESENTATIVES.

24. The House of Representatives shall be composed of members directly chosen by the people of the Commonwealth, and the number of such members shall be, as nearly as practicable, twice the number of the senators.

The number of members chosen in the several States shall be in proportion to the respective numbers of their people, and shall, until the Parliament otherwise provides, be determined, whenever necessary, in the following manner:—

(i) A quota shall be ascertained by dividing the number of the people of the Commonwealth, as shown by the latest statistics of the Commonwealth, by twice the number of the senators:

(ii) The number of members to be chosen in each State shall be determined by dividing the number of the people of the State, as shown by the latest statistics of the Commonwealth, by the quota; and if on such division there is a remainder greater than one-half of the quota, one more member shall be chosen in the State.

But notwithstanding anything in this section, five members at least shall be chosen in each Original State.

25. For the purposes of the last section, if by the law of any State all persons of any race are disqualified from voting at elections for the more numerous House of the Parliament of the State, then, in reckoning the number of the people of the State or of the Commonwealth, persons of that race resident in that State shall not be counted.

26. Notwithstanding anything in section twenty-four, the number of members to be chosen in each State at the first election shall be as follows:—

New South Wales ..	23	South Australia ..	6
Victoria	20	Tasmania	5
Queensland	8		

Provided that if Western Australia is an Original State, the numbers shall be as follows:—

New South Wales ..	26	South Australia ..	7
Victoria	23	Western Australia ..	5
Queensland	9	Tasmania	5

27. Subject to this Constitution, the Parliament may make laws for increasing or diminishing the number of the members of the House of Representatives.

28. Every House of Representatives shall continue for three years from the first meeting of the House, and no longer, but may be sooner dissolved by the Governor-General.

29. Until the Parliament of the Commonwealth otherwise provides, the Parliament of any State may make laws for determining the divisions in each State for which members of the House of Representatives may be chosen, and the number of members to be chosen for each division. A division shall not be formed out of parts of different States.

In the absence of other provisions, each State shall be one electorate.

30. Until the Parliament otherwise provides, the qualification of electors of members of the House of Representatives shall be in each State that which is prescribed by the law of the State as the qualification of electors of the more numerous House of Parliament of the State; but in the choosing of members each elector shall vote only once.*

31. Until the Parliament otherwise provides, but subject to this Constitution, the laws in force in each State for the time being relating to elections for the more numerous House of the Parliament of the State shall, as nearly as practicable, apply to elections in the State of members of the House of Representatives.

32. The Governor-General in Council may cause writs to be issued for general elections of members of the House of Representatives.

After the first general election, the writs shall be issued within ten days from the expiry of a House of Representatives or from the proclamation of a dissolution thereof.

33. Whenever a vacancy happens in the House of Representatives, the Speaker shall issue his writ for the election of a new member, or if there is no Speaker or if he is absent from the Commonwealth the Governor-General in Council may issue the writ.

34. Until the Parliament otherwise provides, the qualifications of a member of the House of Representatives shall be as follows:—

(i) He must be of the full age of twenty-one years, and must be an elector entitled to vote at the election of members of the House of Representatives, or a person qualified to become such elector, and must have been for three years at the least a resident within the limits of the Commonwealth as existing at the time when he is chosen:

(ii) He must be a subject of the Queen, either natural-born or for at least five years naturalized under a law of the United Kingdom or of a Colony which has become or becomes a State, or of the Commonwealth, or of a State.

35. The House of Representatives shall, before proceeding to the despatch of any other business, choose a member to be the Speaker of the House, and as often as the office of Speaker becomes vacant the House shall again choose a member to be the Speaker.

The Speaker shall cease to hold his office if he ceases to be a member. He may be removed from office by a vote of the House, or he may resign his office or his seat by writing addressed to the Governor-General.

36. Before or during any absence of the Speaker, the House of Representatives may choose a member to perform his duties in his absence.

37. A member may by writing addressed to the Speaker, or to the Governor-General if there is no Speaker or if the Speaker is absent from the Commonwealth, resign his place, which thereupon shall become vacant.

38. The place of a member shall become vacant if for two consecutive months of any session of the Parliament he, without the permission of the House, fails to attend the House.

39. Until the Parliament otherwise provides, the presence of at least one-third of the whole number of the members of the House of Representatives shall be necessary to constitute a meeting of the House for the exercise of its powers.

40. Questions arising in the House of Representatives shall be determined by a majority of votes other than that of the Speaker. The Speaker shall not vote unless the numbers are equal, and then he shall have a casting vote.

PART IV.—BOTH HOUSES OF THE PARLIAMENT.

41. No adult person who has or acquires a right to vote at elections for the more numerous House of the Parliament of a State shall, while the right continues, be prevented by any law of the Commonwealth from voting at elections for either House of the Parliament of the Commonwealth.

42. Every senator and every member of the House of Representatives shall before taking his seat make and subscribe before the Governor-General, or some person authorized by him, an oath or affirmation of allegiance in the form set forth in the schedule to this Constitution.

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* The franchise qualification was determined by the Commonwealth Franchise Act 1902.

43. A member of either House of the Parliament shall be incapable of being chosen or of sitting as a member of the other House.

44. Any person who—

(i) Is under any acknowledgment of allegiance, obedience, or adherence to a foreign power, or is a subject or a citizen or entitled to the rights or privileges of a subject or a citizen of a foreign power: or

(ii) Is attainted of treason, or has been convicted and is under sentence, or subject to be sentenced, for any offence punishable under the law of the Commonwealth or of a State by imprisonment for one year or longer: or

(iii) Is an undischarged bankrupt or insolvent: or

(iv) Holds any office of profit under the Crown, or any pension payable during the pleasure of the Crown out of any of the revenues of the Commonwealth: or

(v) Has any direct or indirect pecuniary interest in any agreement with the Public Service of the Commonwealth otherwise than as a member and in common with the other members of an incorporated company consisting of more than twenty-five persons:

shall be incapable of being chosen or of sitting as a senator or a member of the House of Representatives.

But sub-section iv. does not apply to the office of any of the Queen's Ministers of State for the Commonwealth, or of any of the Queen's Ministers for a State, or to the receipt of pay, half-pay, or a pension by any person as an officer or member of the Queen's navy or army, or to the receipt of pay as an officer or member of the naval or military forces of the Commonwealth by any person whose services are not wholly employed by the Commonwealth.

45. If a senator or member of the House of Representatives—

(i) Becomes subject to any of the disabilities mentioned in the last preceding section: or

(ii) Takes the benefit, whether by assignment, composition, or otherwise, of any law relating to bankrupt or insolvent debtors: or

(iii) Directly or indirectly takes or agrees to take any fee or honorarium for services rendered to the Commonwealth, or for services rendered in the Parliament to any person or State:

his place shall thereupon become vacant.

46. Until the Parliament otherwise provides, any person declared by this Constitution to be incapable of sitting as a senator or as a member of the House of Representatives shall, for every day on which he so sits, be liable to pay the sum of one hundred pounds to any person who sues for it in any court of competent jurisdiction.

47. Until the Parliament otherwise provides, any question respecting the qualification of a senator or of a member of the House of Representatives, or respecting a vacancy in either House of the Parliament, and any question of a disputed election to either House, shall be determined by the House in which the question arises.

48. Until the Parliament otherwise provides, each senator and each member of the House of Representatives shall receive an allowance of four hundred pounds a year, to be reckoned from the day on which he takes his seat.[*]

49. The powers, privileges, and immunities of the Senate and of the House of Representatives, and of the members and the committees of each House, shall be such as are declared by the Parliament, and until declared shall be those of the Commons House of Parliament of the United Kingdom, and of its members and committees, at the establishment of the Commonwealth.

50. Each House of the Parliament may make rules and orders with respect to—

(i) The mode in which its powers, privileges, and immunities may be exercised and upheld:

(ii) The order and conduct of its business and proceedings either separately or jointly with the other House.

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[*] By the Parliamentary Allowances Act 1907, the amount of the allowance was increased to £600 a year; and by the Parliamentary Allowances Act 1920 to £1,000 a year. (The latter Act also apportioned special allowances to the President of the Senate; the Speaker of the House of Representatives; the Chairmen of Committees in both Houses; and the Opposition Leaders in both Houses.)

PART V.—POWERS OF THE PARLIAMENT.*

51. The Parliament shall, subject to this Constitution, have power to make laws for the peace, order, and good government of the Commonwealth with respect to—

(i) Trade and commerce with other countries, and among the States:
(ii) Taxation; but so as not to discriminate between States or parts of States:
(iii) Bounties on the production or export of goods, but so that such bounties shall be uniform throughout the Commonwealth:
(iv) Borrowing money on the public credit of the Commonwealth:
(v) Postal, telegraphic, telephonic, and other like services:
(vi) The naval and military defence of the Commonwealth and of the several States, and the control of the forces to execute and maintain the laws of the Commonwealth:
(vii) Lighthouses, lightships, beacons and buoys:
(viii) Astronomical and meteorological observations:
(ix) Quarantine:
(x) Fisheries in Australian waters beyond territorial limits:
(xi) Census and statistics:
(xii) Currency, coinage, and legal tender:
(xiii) Banking, other than State banking; also State banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money:
(xiv) Insurance, other than State insurance; also State insurance extending beyond the limits of the State concerned:
(xv) Weights and measures:
(xvi) Bills of exchange and promissory notes:
(xvii) Bankruptcy and insolvency:
(xviii) Copyrights, patents of inventions and designs, and trade marks:
(xix) Naturalization and aliens:
(xx) Foreign corporations, and trading or financial corporations formed within the limits of the Commonwealth:
(xxi) Marriage:
(xxii) Divorce and matrimonial causes; and in relation thereto, parental rights, and the custody and guardianship of infants:
(xxiii) Invalid and old-age pensions:
(xxiv) The service and execution throughout the Commonwealth of the civil and criminal process and the judgments of the courts of the States:
(xxv) The recognition throughout the Commonwealth of the laws, the public Acts and records, and the judicial proceedings of the States:
(xxvi) The people of any race, other than the aboriginal race in any State, for whom it is deemed necessary to make special laws:
(xxvii) Immigration and emigration:
(xxviii) The influx of criminals:
(xxix) External affairs:
(xxx) The relations of the Commonwealth with the islands of the Pacific:
(xxxi) The acquisition of property on just terms from any State or person for any purpose in respect of which the Parliament has power to make laws:
(xxxii) The control of railways with respect to transport for the naval and military purposes of the Commonwealth:
(xxxiii) The acquisition, with the consent of a State, of any railways of the State on terms arranged between the Commonwealth and the State:
(xxxiv) Railway construction and extension in any State with the consent of that State:
(xxxv) Conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State:
(xxxvi) Matters in respect of which this Constitution makes provision until the Parliament otherwise provides:

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[*] Particulars of proposed laws which were submitted to referenda are given in Chapter III., General Government.

(xxxvii) Matters referred to the Parliament of the Commonwealth by the Parliament or Parliaments of any State or States, but so that the law shall extend only to States by whose Parliaments the matter is referred, or which afterwards adopt the law:

(xxxviii) The exercise within the Commonwealth, at the request or with the concurrence of the Parliaments of all the States directly concerned, of any power which can at the establishment of this Constitution be exercised only by the Parliament of the United Kingdom or by the Federal Council of Australasia:

(xxxix) Matters incidental to the execution of any power vested by this Constitution in the Parliament or in either House thereof, or in the Government of the Commonwealth, or in the Federal Judicature, or in any department or officer of the Commonwealth.

52. The Parliament shall, subject to this Constitution, have exclusive power to make laws for the peace, order, and good government of the Commonwealth, with respect to—

(i) The seat of Government of the Commonwealth, and all places acquired by the Commonwealth for public purposes:

(ii) Matters relating to any department of the public service the control of which is by this Constitution transferred to the Executive Government of the Commonwealth:

(iii) Other matters declared by this Constitution to be within the exclusive power of the Parliament.

53. Proposed laws appropriating revenue or moneys, or imposing taxation, shall not originate in the Senate. But a proposed law shall not be taken to appropriate revenue or moneys, or to impose taxation, by reason only of its containing provisions for the imposition or appropriation of fines or other pecuniary penalties, or for the demand or payment or appropriation of fees for licences, or fees for services under the proposed law.

The Senate may not amend proposed laws imposing taxation, or proposed laws appropriating revenue or moneys for the ordinary annual services of the Government.

The Senate may not amend any proposed laws so as to increase any proposed charge or burden on the people.

The Senate may at any stage return to the House of Representatives any proposed law which the Senate may not amend, requesting, by message, the omission or amendment of any items or provisions therein. And the House of Representatives may, if it thinks fit, make any of such omissions or amendments, with or without modifications.

Except as provided in this section, the Senate shall have equal power with the House of Representatives in respect of all proposed laws.

54. The proposed law which appropriates revenue or moneys for the ordinary annual services of the Government shall deal only with such appropriation.

55. Laws imposing taxation shall deal only with the imposition of taxation, and any provisions therein dealing with any other matter shall be of no effect.

Laws imposing taxation, except laws imposing duties of customs or of excise, shall deal with one subject of taxation only; but laws imposing duties of customs shall deal with duties of customs only, and laws imposing duties of excise shall deal with duties of excise only.

56. A vote, resolution, or proposed law for the appropriation of revenue or moneys shall not be passed unless the purpose of the appropriation has in the same session been recommended by message of the Governor-General to the House in which the proposal originated.

57. If the House of Representatives passes any proposed law, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, and if after an interval of three months the House of Representatives, in the same or the next session, again passes the proposed law with or without any amendments which have been made, suggested, or agreed to by the Senate, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, the Governor General may dissolve the Senate and the House of Representatives simultaneously. But such dissolution shall not take place within six months before the date of the expiry of the House of Representatives by effluxion of time.

If after such dissolution the House of Representatives again passes the proposed law, with or without any amendments which have been made, suggested, or agreed to by the Senate, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, the Governor-General may convene a joint sitting of the members of the Senate and of the House of Representatives.

The members present at the joint sitting may deliberate and shall vote together upon the proposed law as last proposed by the House of Representatives, and upon amendments, if any, which have been made therein by one House and not agreed to by the other, and any such amendments which are affirmed by an absolute majority of the total number of the members of the Senate and House of Representatives shall be taken to have been carried, and if the proposed law, with the amendments, if any, so carried is affirmed by an absolute majority of the total number of members of the Senate and House of Representatives, it shall be taken to have been duly passed by both Houses of the Parliament, and shall be presented to the Governor-General for the Queen's assent.

58. When a proposed law passed by both Houses of the Parliament is presented to the Governor-General for the Queen's assent, he shall declare, according to his discretion, but subject to this Constitution, that he assents in the Queen's name, or that he withholds assent, or that he reserves the law for the Queen's pleasure.

The Governor-General may return to the House in which it originated any proposed law so presented to him, and may transmit therewith any amendments which he may recommend, and the Houses may deal with the recommendation.

59. The Queen may disallow any law within one year from the Governor-General's assent, and such disallowance on being made known by the Governor-General by speech or message to each of the Houses of the Parliament, or by Proclamation, shall annul the law from the day when the disallowance is so made known.

60. A proposed law reserved for the Queen's pleasure shall not have any force unless and until within two years from the day on which it was presented to the Governor-General for the Queen's assent the Governor-General makes known, by speech or message to each of the Houses of the Parliament, or by Proclamation, that it has received the Queen's assent.

CHAPTER II.—THE EXECUTIVE GOVERNMENT.

61. The executive power of the Commonwealth is vested in the Queen and is exerciseable by the Governor-General as the Queen's representative, and extends to the execution and maintenance of this Constitution, and of the laws of the Commonwealth.

62. There shall be a Federal Executive Council to advise the Governor-General in the government of the Commonwealth, and the members of the Council shall be chosen and summoned by the Governor-General and sworn as Executive Councillors, and shall hold office during his pleasure.

63. The provisions of this Constitution referring to the Governor-General in Council shall be construed as referring to the Governor-General acting with the advice of the Federal Executive Council.

64. The Governor-General may appoint officers to administer such departments of State of the Commonwealth as the Governor-General in Council may establish.

Such officers shall hold office during the pleasure of the Governor-General. They shall be members of the Federal Executive Council, and shall be the Queen's Ministers of State for the Commonwealth.

After the first general election no Minister of State shall hold office for a longer period than three months unless he is or becomes a senator or a member of the House of Representatives.

65. Until the Parliament otherwise provides, the Ministers of State shall not exceed seven in number, and shall hold such offices as the Parliament prescribes, or, in the absence of provision, as the Governor-General directs.*

66. There shall be payable to the Queen out of the Consolidated Revenue Fund of the Commonwealth, for the salaries of the Ministers of State, an annual sum which until the Parliament otherwise provides, shall not exceed twelve thousand pounds a year.*

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* By the Ministers of State Acts 1915 and 1917, the Ministers of State may exceed seven, but shall not exceed nine. £15.300 annually was allotted by these Acts for their salaries; and £800 per annum each was added by the Parliamentary Allowances Act 1920.

67. Until the Parliament otherwise provides, the appointment and removal of all other officers of the Executive Government of the Commonwealth shall be vested in the Governor-General in Council, unless the appointment is delegated by the Governor-General in Council or by a law of the Commonwealth to some other authority.

68. The command in chief of the naval and military forces of the Commonwealth is vested in the Governor-General as the Queen's representative.

69. On a date or dates to be proclaimed by the Governor-General after the establishment of the Commonwealth the following departments of the public service in each State shall become transferred to the Commonwealth:—

Posts, telegraphs, and telephones:
Naval and military defence:
Lighthouses, lightships, beacons, and buoys:
Quarantine.

But the departments of customs and of excise in each State shall become transferred to the Commonwealth on its establishment.

70. In respect of matters which, under this Constitution, pass to the Executive Government of the Commonwealth, all powers and functions which at the establishment of the Commonwealth are vested in the Governor of a Colony, or in the Governor of a Colony with the advice of his Executive Council, or in any authority of a Colony, shall vest in the Governor-General, or in the Governor-General in Council, or in the authority exercising similar powers under the Commonwealth, as the case requires.

CHAPTER III.—THE JUDICATURE.

71. The judicial power of the Commonwealth shall be vested in a Federal Supreme Court, to be called the High Court of Australia, and in such other federal courts as the Parliament creates, and in such other courts as it invests with federal jurisdiction. The High Court shall consist of a Chief Justice, and so many other Justices, not less than two, as the Parliament prescribes.

72. The Justices of the High Court and of the other Courts created by the Parliament—

(i) Shall be appointed by the Governor-General in Council:
(ii) Shall not be removed except by the Governor-General in Council, on an address from both Houses of the Parliament in the same session, praying for such removal on the ground of proved misbehaviour or incapacity;
(iii) Shall receive such remuneration as the Parliament may fix; but the remuneration shall not be diminished during their continuance in office.

73. The High Court shall have jurisdiction, with such exceptions and subject to such regulations as the Parliament prescribes, to hear and determine appeals from all judgments, decrees, orders, and sentences—

(i) Of any Justice or Justices exercising the original jurisdiction of the High Court:
(ii) Of any other federal court, or court exercising federal jurisdiction; or of the Supreme Court of any State, or of any other court of any State from which at the establishment of the Commonwealth an appeal lies to the Queen in Council:
(iii) Of the Inter-State Commission, but as to questions of law only:

and the judgment of the High Court in all such cases shall be final and conclusive.

But no exception or regulation prescribed by the Parliament shall prevent the High Court from hearing and determining any appeal from the Supreme Court of a State in any matter in which at the establishment of the Commonwealth an appeal lies from such Supreme Court to the Queen in Council.

Until the Parliament otherwise provides, the conditions of and restrictions on appeals to the Queen in Council from the Supreme Courts of the several States shall be applicable to appeals from them to the High Court.

74. No appeal shall be permitted to the Queen in Council from a decision of the High Court upon any question, howsoever arising, as to the limits inter se of the Constitutional powers of the Commonwealth and those of any State or States, or as to the limits inter se of the Constitutional powers of any two or more States, unless the High Court shall certify that the question is one which ought to be determined by Her Majesty in Council.

The High Court may so certify if satisfied that for any special reason the certificate should be granted, and thereupon an appeal shall lie to Her Majesty in Council on the question without further leave

Except as provided in this section, this Constitution shall not impair any right which the Queen may be pleased to exercise by virtue of Her Royal prerogative to grant special leave of appeal from the High Court to Her Majesty in Council. The Parliament may make laws limiting the matters in which such leave may be asked, but proposed laws containing any such limitation shall be reserved by the Governor-General for Her Majesty's pleasure.

75. In all matters—

(i) Arising under any treaty :

(ii) Affecting consuls or other representatives of other countries :

(iii) In which the Commonwealth, or a person suing or being sued on behalf of the Commonwealth, is a party :

(iv) Between States, or between residents of different States, or between a State and a resident of another State :

(v) In which a writ of Mandamus or prohibition or an injunction is sought against an officer of the Commonwealth :

the High Court shall have original jurisdiction.

76. The Parliament may make laws conferring original jurisdiction on the High Court in any matter—

(i) Arising under this Constitution, or involving its interpretation :
(ii) Arising under any laws made by the Parliament :
(iii) Of Admiralty and maritime jurisdiction :
(iv) Relating to the same subject-matter claimed under the laws of different States.

77. With respect to any of the matters mentioned in the last two sections the Parliament may make laws—

(i) Defining the jurisdiction of any federal court other than the High Court :

(ii) Defining the extent to which the jurisdiction of any federal court shall be exclusive of that which belongs to or is invested in the courts of the States :

(iii) Investing any court of a State with federal jurisdiction.

78. The Parliament may make laws conferring rights to proceed against the Commonwealth or a State in respect of matters within the limits of the judicial power.

79. The federal jurisdiction of any court may be exercised by such number of judges as the Parliament prescribes.

80. The trial on indictment of any offence against any law of the Commonwealth shall be by jury, and every such trial shall be held in the State where the offence was committed, and if the offence was not committed within any State the trial shall be held at such place or places as the Parliament prescribes.

CHAPTER IV.—FINANCE AND TRADE.

81. All revenues or moneys raised or received by the Executive Government of the Commonwealth shall form one Consolidated Revenue Fund, to be appropriated for the purposes of the Commonwealth in the manner and subject to the charges and liabilities imposed by this Constitution.

82. The costs, charges, and expenses incident to the collection, management, and receipt of the Consolidated Revenue Fund shall form the first charge thereon ; and the revenue of the Commonwealth shall in the first instance be applied to the payment of the expenditure of the Commonwealth.

83. No money shall be drawn from the Treasury of the Commonwealth except under appropriation made by law.

But until the expiration of one month after the first meeting of the Parliament the Governor-General in Council may draw from the Treasury and expend such moneys as may be necessary for the maintenance of any department transferred to the Commonwealth and for the holding of the first elections for the Parliament.

84. When any department of the public service of a State becomes transferred to the Commonwealth, all officers of the department shall become subject to the control of the Executive Government of the Commonwealth.

Any such officer who is not retained in the service of the Commonwealth shall, unless he is appointed to some other office of equal emolument in the public service of the State, be entitled to receive from the State any pension, gratuity, or other compensation, payable under the law of the State on the abolition of his office.

Any such officer who is retained in the service of the Commonwealth shall preserve all his existing and accruing rights, and shall be entitled to retire from office at the time, and on the pension or retiring allowance, which would be permitted by the law of the State if his service with the Commonwealth were a continuation of his service with the State. Such pension or retiring allowance shall be paid to him by the Commonwealth; but the State shall pay to the Commonwealth a part thereof, to be calculated on the proportion which his term of service with the State bears to his whole term of service, and for the purpose of the calculation his salary shall be taken to be that paid to him by the State at the time of the transfer.

Any officer who is, at the establishment of the Commonwealth, in the public service of a State, and who is, by consent of the Governor of the State with the advice of the Executive Council thereof, transferred to the public service of the Commonwealth, shall have the same rights as if he had been an officer of a department transferred to the Commonwealth and were retained in the service of the Commonwealth.

85. When any department of the public service of a State is transferred to the Commonwealth—

(i) All property of the State of any kind, used exclusively in connexion with the department, shall become vested in the Commonwealth, but, in the case of the departments controlling customs and excise and bounties, for such time only as the Governor-General in Council may declare to be necessary:

(ii) The Commonwealth may acquire any property of the State, of any kind used, but not exclusively used in connexion with the department; the value thereof shall, if no agreement can be made, be ascertained in, as nearly as may be, the manner in which the value of land, or of an interest in land, taken by the State for public purposes is ascertained under the law of the State in force at the establishment of the Commonwealth:

(iii) The Commonwealth shall compensate the State for the value of any property passing to the Commonwealth under this section: if no agreement can be made as to the mode of compensation, it shall be determined under laws to be made by the Parliament:

(iv) The Commonwealth shall, at the date of the transfer, assume the current obligations of the State in respect of the department transferred.

86. On the establishment of the Commonwealth, the collection and control of duties of customs and of excise, and the control of the payment of bounties, shall pass to the Executive Government of the Commonwealth.

87. During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, of the net revenue of the Commonwealth from duties of customs and of excise not more than one-fourth shall be applied annually by the Commonwealth towards its expenditure.

The balance shall, in accordance with this Constitution, be paid to the several States, or applied towards the payment of interest on debts of the several States taken over by the Commonwealth.

88. Uniform duties of customs shall be imposed within two years after the establishment of the Commonwealth.

89. Until the imposition of uniform duties of customs—

- (i) The Commonwealth shall credit to each State the revenues collected therein by the Commonwealth.
- (ii) The Commonwealth shall debit to each State—
  - (*a*) The expenditure therein of the Commonwealth incurred solely for the maintenance or continuance, as at the time of transfer, of any department transferred from the State to the Commonwealth ;
  - (*b*) The proportion of the State according to the number of its people, in the other expenditure of the Commonwealth.
- (iii) The Commonwealth shall pay to each State month by month the balance (if any) in favour of the State.

90. On the imposition of uniform duties of customs the power of the Parliament to impose duties of customs and of excise, and to grant bounties on the production or export of goods, shall become exclusive.

On the imposition of uniform duties of customs all laws of the several States imposing duties of customs or of excise, or offering bounties on the production or export of goods, shall cease to have effect, but any grant of or agreement for any such bounty lawfully made by or under the authority of the Government of any State shall be taken to be good if made before the thirtieth day of June, one thousand eight hundred and ninety-eight, and not otherwise.

91. Nothing in this Constitution prohibits a State from granting any aid to or bounty on mining for gold, silver, or other metals, nor from granting, with the consent of both Houses of the Parliament of the Commonwealth expressed by resolution, any aid to or bounty on the production or export of goods.

92. On the imposition of uniform duties of customs, trade, commerce, and intercourse among the States, whether by means of internal carriage or ocean navigation, shall be absolutely free.

But notwithstanding anything in this Constitution, goods imported before the imposition of uniform duties of customs into any State, or into any Colony which whilst the goods remain therein, becomes a State, shall, on thence passing into another State within two years after the imposition of such duties, be liable to any duty chargeable on the importation of such goods into the Commonwealth, less any duty paid in respect of the goods on their importation.

93. During the first five years after the imposition of uniform duties of customs and thereafter until the Parliament otherwise provides—

- (i) The duties of customs chargeable on goods imported into a State and afterwards passing into another State for consumption, and the duties of excise paid on goods produced or manufactured in a State and afterwards passing into another State for consumption, shall be taken to have been collected not in the former but in the latter State :
- (ii) Subject to the last sub-section, the Commonwealth, shall credit revenue, debit expenditure, and pay balances to the several States as prescribed for the period preceding the imposition of uniform duties of customs.

94. After five years from the imposition of uniform duties of customs, the Parliament may provide, on such basis as it deems fair, for the monthly payment to the several States of all surplus revenue of the Commonwealth.

95. Notwithstanding anything in this Constitution, the Parliament of the State of Western Australia, if that State be an original State, may, during the first five years after the imposition of uniform duties of customs, impose duties of customs on goods passing into that State and not originally imported from beyond the limits of the Commonwealth ; and such duties shall be collected by the Commonwealth.

But any duty so imposed on any goods shall not exceed during the first of such years the duty chargeable on the goods under the law of Western Australia in force at the imposition of uniform duties, and shall not exceed during the second, third, fourth, and fifth of such years respectively, four-fifths, three-fifths, two-fifths, and one-fifth of such latter duty, and all duties imposed under this section shall cease at the expiration of the fifth year after the imposition of uniform duties.

If at any time during the five years the duty on any goods under this section is higher than the duty imposed by the Commonwealth on the importation of the like goods, then such higher duty shall be collected on the goods when imported into Western Australia from beyond the limits of the Commonwealth.

96. During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, the Parliament may grant financial assistance to any State on such terms and conditions as the Parliament thinks fit.

97. Until the Parliament otherwise provides, the laws in force in any Colony which has become or becomes a State with respect to the receipt of revenue and the expenditure of money on account of the Government of the Colony, and the review and audit of such receipt and expenditure, shall apply to the receipt of revenue and the expenditure of money on account of the Commonwealth in the State in the same manner as if the Commonwealth, or the Government or an officer of the Commonwealth, were mentioned whenever the Colony, or the Government or an officer of the Colony, is mentioned.

98. The power of the Parliament to make laws with respect to trade and commerce extends to navigation and shipping, and to railways the property of any State.

99. The Commonwealth shall not, by any law or regulation of trade, commerce, or revenue, give preference to one State or any part thereof over another State or any part thereof.

100. The Commonwealth shall not, by any law or regulation of trade or commerce, abridge the right of a State or of the residents therein to the reasonable use of the waters of rivers for conservation or irrigation.

101. There shall be an Inter-State Commission, with such powers of adjudication and administration as the Parliament deems necessary for the execution and maintenance, within the Commonwealth, of the provisions of this Constitution relating to trade and commerce, and of all laws made thereunder.[*]

102. The Parliament may by any law with respect to trade or commerce forbid, as to railways, any preference or discrimination by any State, or by any authority constituted under a State, if such preference or discrimination is undue and unreasonable, or unjust to any State; due regard being had to the financial responsibilities incurred by any State in connexion with the construction and maintenance of its railways. But no preference or discrimination shall, within the meaning of this section, be taken to be undue and unreasonable, or unjust to any State, unless so adjudged by the Inter-State Commission.

103. The members of the Inter-State Commission—

(i) Shall be appointed by the Governor-General in Council:

(ii) Shall hold office for seven years, but may be removed within that time by the Governor-General in Council, on an address from both Houses of the Parliament in the same session praying for such removal on the ground of proved misbehaviour or incapacity:

(iii) Shall receive such remuneration as the Parliament may fix; but such remuneration shall not be diminished during their continuance in office.

104. Nothing in this Constitution shall render unlawful any rate for the carriage of goods upon a railway, the property of a State, if the rate is deemed by the Inter-State Commission to be necessary for the development of the territory of the State, and if the rate applies equally to goods within the State and to goods passing into the State from other States.

105. The Parliament may take over from the States their public debts [as existing at the establishment of the Commonwealth],[†] or a proportion thereof according to the respective numbers of their people as shown by the latest statistics of the Commonwealth, and may convert, renew, or consolidate such debts, or any part thereof; and the States shall indemnify the Commonwealth in respect of the debts taken over, and thereafter the interest payable in respect of the debts shall be deducted and retained from the portions of the surplus revenue of the Commonwealth payable to the several States, or if such surplus is insufficient, or if there is no surplus, then the deficiency or the whole amount shall be paid by the several States.

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[*] The Commission was brought into existence in 1913, under Act No. 33 of 1912, by the appointment of Commissioners for seven years. When this period expired no fresh appointments were made.

[†] Under section 2 of the Constitution Alteration (State Debts) 1909, the words in square brackets are omitted.

CHAPTER V.—THE STATES.

106. The Constitution of each State of the Commonwealth shall, subject to this Constitution, continue as at the establishment of the Commonwealth, or as at the admission or establishment of the State, as the case may be, until altered in accordance with the Constitution of the State.

107. Every power of the Parliament of a Colony which has become or becomes a State, shall, unless it is by this Constitution exclusively vested in the Parliament of the Commonwealth or withdrawn from the Parliament of the State, continue as at the establishment of the Commonwealth, or as at the admission or establishment of the State, as the case may be.

108. Every law in force in a Colony which has become or becomes a State, and relating to any matter within the powers of the Parliament of the Commonwealth, shall, subject to this Constitution, continue in force in the State; and, until provision is made in that behalf by the Parliament of the Commonwealth, the Parliament of the State shall have such powers of alteration and of repeal in respect of any such law as the Parliament of the Colony had until the Colony became a State.

109. When a law of a State is inconsistent with a law of the Commonwealth, the latter shall prevail, and the former shall, to the extent of the inconsistency, be invalid.

110. The provisions of this Constitution relating to the Governor of a State extend and apply to the Governor for the time being of the State, or other chief executive officer or administrator of the government of the State.

111. The Parliament of a State may surrender any part of the State to the Commonwealth; and upon such surrender and the acceptance thereof by the Commonwealth, such part of the State shall become subject to the exclusive jurisdiction of the Commonwealth.

112. After uniform duties of customs have been imposed, a State may levy on imports or exports, or on goods passing into or out of the State, such charges as may be necessary for executing the inspection laws of the State; but the net produce of all charges so levied shall be for the use of the Commonwealth; and any such inspection laws may be annulled by the Parliament of the Commonwealth.

113. All fermented, distilled, or other intoxicating liquids passing into any State or remaining therein for use, consumption, sale, or storage, shall be subject to the laws of the State as if such liquids had been produced in the State.

114. A State shall not, without the consent of the Parliament of the Commonwealth, raise or maintain any naval or military force, or impose any tax on property of any kind belonging to the Commonwealth, nor shall the Commonwealth impose any tax on property of any kind belonging to a State.

115. A State shall not coin money, nor make anything but gold and silver coin a legal tender in payment of debts.

116. The Commonwealth shall not make any law for establishing any religion, or for imposing any religious observance, or for prohibiting the free exercise of any religion, and no religious test shall be required as a qualification for any office or public trust under the Commonwealth.

117. A subject of the Queen, resident in any State, shall not be subject in any other State to any disability or discrimination which would not be equally applicable to him if he were a subject of the Queen resident in such other State.

118. Full faith and credit shall be given, throughout the Commonwealth, to the laws, the public Acts and records, and the judicial proceedings of every State.

119. The Commonwealth shall protect every State against invasion and, on the application of the Executive Government of the State, against domestic violence.

120. Every State shall make provision for the detention in its prisons of persons accused or convicted of offences against the laws of the Commonwealth, and for the punishment of persons convicted of such offences, and the Parliament of the Commonwealth may make laws to give effect to this provision.

CHAPTER VI.—NEW STATES.

121. The Parliament may admit to the Commonwealth or establish new States, and may upon such admission or establishment make or impose such terms and conditions, including the extent of representation in either House of the Parliament, as it thinks fit.

122. The Parliament may make laws for the government of any territory surrendered by any State to and accepted by the Commonwealth, or of any territory placed by the Queen under the authority of and accepted by the Commonwealth, or otherwise acquired by the Commonwealth, and may allow the representation of such territory in either House of the Parliament to the extent and on the terms which it thinks fit.

123. The Parliament of the Commonwealth may, with the consent of the Parliament of a State, and the approval of the majority of the electors of the State voting upon the question, increase, diminish, or otherwise alter the limits of the State, upon such terms and conditions as may be agreed on, and may, with the like consent, make provision respecting the effect and operation of any increase or diminution or alteration of territory in relation to any State affected.

124. A new State may be formed by separation of territory from a State, but only with the consent of the Parliament thereof, and a new State may be formed by the union of two or more States or parts of States, but only with the consent of the Parliaments of the States affected.

CHAPTER VII.—MISCELLANEOUS.

125. The seat of Government of the Commonwealth shall be determined by the Parliament, and shall be within territory which shall have been granted to or acquired by the Commonwealth, and shall be vested in and belong to the Commonwealth, and shall be in the State of New South Wales, and be distant not less than one hundred miles from Sydney.

Such territory shall contain an area of not less than one hundred square miles, and such portion thereof as shall consist of Crown lands shall be granted to the Commonwealth without any payment therefor.

The Parliament shall sit at Melbourne until it meet at the seat of Government.

126. The Queen may authorize the Governor-General to appoint any person, or any persons jointly or severally, to be his deputy or deputies within any part of the Commonwealth, and in that capacity to exercise during the pleasure of the Governor-General such powers and functions of the Governor-General as he thinks fit to assign to such deputy or deputies, subject to any limitations expressed or directions given by the Queen; but the appointment of such deputy or deputies shall not affect the exercise by the Governor-General himself of any power or function.

127. In reckoning the numbers of the people of the Commonwealth, or of a State or other part of the Commonwealth, aboriginal natives shall not be counted.

CHAPTER VIII.—ALTERATION OF THE CONSTITUTION.

128. This Constitution shall not be altered except in the following manner:—

The proposed law for the alteration thereof must be passed by an absolute majority of each House of the Parliament, and not less than two nor more than six months after its passage through both Houses the proposed law shall be submitted in each State to the electors qualified to vote for the election of members of the House of Representatives.

But if either House passes any such proposed law by an absolute majority, and the other House rejects or fails to pass it or passes it with any amendment to which the first-mentioned House will not agree, and if after an interval of three months the first-mentioned House in the same or the next session again passes the proposed law by an absolute majority with or without any amendment which has been made or agreed to by the other House, and such other House rejects or fails to pass it or passes it with any amendment to which the first-mentioned House will not agree, the Governor-General may submit the proposed law as last proposed by the first-mentioned House, and either with or without any amendments subsequently agreed to by both Houses, to the electors in each State qualified to vote for the election of the House of Representatives.

When a proposed law is submitted to the electors the vote shall be taken in such manner as the Parliament prescribes. But until the qualification of electors of members of the House of Representatives becomes uniform throughout the Commonwealth, only one-half the electors voting for and against the proposed law shall be counted in any State in which adult suffrage prevails.

And if in a majority of the States a majority of the electors voting approve the proposed law, and if a majority of all the electors voting also approve the proposed law, it shall be presented to the Governor-General for the Queen's assent.

No alteration diminishing the proportionate representation of any State in either House of the Parliament, or the minimum number of representatives of a State in the House of Representatives, or increasing, diminishing, or otherwise altering the limits of the State, or in any manner affecting the provisions of the Constitution in relation thereto, shall become law unless the majority of the electors voting in that State approve the proposed law.

SCHEDULE.

OATH.

I, *A.B.*, do swear that I will be faithful and bear true allegiance to Her Majesty Queen Victoria, Her heirs and successors according to law. SO HELP ME GOD!

AFFIRMATION.

I, *A.B.*, do solemnly and sincerely affirm and declare that I will be faithful and bear true allegiance to Her Majesty Queen Victoria, Her heirs and successors according to law.

(NOTE.—*The name of the King or Queen of the United Kingdom of Great Britain and Ireland for the time being is to be substituted from time to time.*)

2. **The Royal Proclamation.**—The preceding Act received the Royal assent on the 9th July, 1900. This made it lawful to declare that the people of Australia should be united in a Federal Commonwealth. This proclamation, made on the 17th September, 1900, constituted the Commonwealth as from the 1st January, 1901 : it reads as follows :—

BY THE QUEEN.

A PROCLAMATION.

(Signed) VICTORIA R.

WHEREAS by an Act of Parliament passed in the Sixty-third and Sixty-fourth Years of Our Reign, intituled "An Act to constitute the Commonwealth of *Australia*," it is enacted that it shall be lawful for the Queen, with the advice of the Privy Council, to declare by Proclamation, that, on and after a day therein appointed, not being later than One year after the passing of this Act, the people of *New South Wales*, *Victoria*, *South Australia*, *Queensland*, and *Tasmania*, and also, if Her Majesty is satisfied that the people of *Western Australia* have agreed thereto, of *Western Australia*, shall be united in a Federal Commonwealth under the name of the Commonwealth of Australia.

And whereas We are satisfied that the people of *Western Australia* have agreed thereto accordingly.

We therefore, by and with the advice of Our Privy Council, have thought fit to issue this Our Royal Proclamation, and We do hereby declare that on and after the First day of *January* One thousand nine hundred and one, the people of *New South Wales*, *Victoria*, *South Australia*, *Queensland*, *Tasmania*, and *Western Australia* shall be united in a Federal Commonwealth under the name of the Commonwealth of *Australia*.

Given at Our Court at *Balmoral* this Seventeenth day of *September*, in the Year of Our Lord One thousand nine hundred, and in the Sixty-fourth Year of Our Reign.

GOD SAVE THE QUEEN.

CHAPTER II.

PHYSIOGRAPHY.

§ 1. General Description of Australia.

1. **Geographical Position.**—(i) *General.* The Australian Commonwealth, which includes the island continent of Australia proper and the island of Tasmania, is situated in the Southern Hemisphere, and comprises in all an area of about 2,974,581 square miles, the mainland alone containing about 2,948,366 square miles. Bounded on the west and east by the Indian and Pacific Oceans respectively, it lies between longitudes 113° 9′ E. and 153° 39′ E., while its northern and southern limits are the parallels of latitude 10° 41′ S. and 39° 8′ S., or, including Tasmania, 43° 39′ S. On its north are the Timor and Arafura Seas and Torres Strait—on its south the Southern Ocean and Bass Strait. The extreme points are " Steep Point " on the west, " Cape Byron " on the east, " Cape York " on the north, " Wilson's Promontory " on the south, or, if Tasmania be included, " South East Cape."

(ii) *Tropical and Temperate Regions.* Of the total area of Australia nearly 40 per cent. lies within the tropics. Assuming, as is usual, that the latitude of the Tropic of Capricorn is 23° 30′ S. (its correct value for 1927 is 23° 26′ 55.6″), the areas within the tropical and temperate zones are approximately as follows :—

AUSTRALIA—AREAS OF TROPICAL AND TEMPERATE REGIONS.

(States and Territory Partially within Tropics.)

Areas.	Queensland.	Western Australia.	Northern Territory.	Total.
	Sq. Miles.	Sq. Miles.	Sq. Miles.	Sq. Miles.
Within Tropical Zone	359,000	364,000	426,320	1,149,320
Within Temperate Zone	311,500	611,920	97,300	1,020,720
Ratio of Tropical part to whole State ..	0.535	0.373	0.814	0.530
Ratio of Temperate part to whole State ..	0.465	0.627	0.186	0.470

Thus the tropical part is roughly about one-half (0.530) of the three territories mentioned above, or about five-thirteenths of the whole of Australia (0.386).

2. **Area of Australia compared with Areas of other Countries.**—It is not always realized that the area of Australia is nearly as great as that of the United States of America, that it is four-fifths of that of Canada, that it is over one-fifth of the area of the whole of the British Empire, that it is more than three-fourths of the whole area of Europe, and that it is about 25 times as large as Great Britain and Ireland or Italy. This great area, coupled with a limited population, renders the solution of the problem of Australian development a particularly difficult one. The areas of Australia and of other countries are given in the following table :—

AREA OF AUSTRALIA AND OF OTHER COUNTRIES.

Country.	Area.
Continental Divisions—	Sq. miles.
Europe	3,886,132
Asia	15.936.125
Africa	13.044,244
North and Central America and West Indies	8,665,836
South America	7,134.460
Australasia and Polynesia	3,463,146
Total, exclusive of Arctic and Antarctic Conts.	52,129,943
Europe—	
Russia	1,680,730
France	212,659
Spain	194,800
Germany	181,714
Sweden	173,105
Poland	149,958
Finland	132,642
Norway	124,964
Rumania	122,282
Italy and annexed Provinces	119,714
Serb, Croat, and Slovene State	96,134
Great Britain and Northern Ireland	94,633
Lithuania	59,633
Czecho-Slovakia	54,207
Greece	49,912
Bulgaria	39,814
Iceland	39,709
Georgia	39,000
Hungary	35,911
Portugal	35,490
Azerbaijan	32,950
Austria	32,369
Irish Free State	27,000
Latvia	25,000
Spitzbergen, Bear and adjacent islands	25,000
Estonia	18,354
Albania	17,374
Denmark	17,108
Switzerland	15,940
Netherlands	13,210
Belgium	11,755
Turkey	10,882
Luxemburg	999
Danzig	754
Andorra	191
Malta	122
Liechtenstein	65
San Marino	38
Monaco	8
Gibraltar	2
Total, Europe	3,886,132

Country.	Area.
Asia—	Sq. miles.
Russia	5,460,390
China and Dependencies	4,279,170
British India and Administered Territories	1,094,300
Arabia	1,000 000
Feudatory Indian States	711,032
Persia	628,000
Dutch East Indies	572,950
Turkey	483,656
Japan (and Dependencies)	260,707
Afghanistan	245,000
Siam	200,148
Iraq (Mesopotamia)	143,250
Philippine Islands	115,026
Laos	82,604
Oman	82,000
British Borneo, Brunei, and Sarawak	77,106
Uzbekistan	71,346
Cambodia	67,550
Syria	60,000
Nepál	54,000
Tonking	40,530
Annam	39,758
Federated Malay States	27.506
Cochin China	26,476
Ceylon	25,332
Malay Protectorate (inc. Johore)	22,486
Bhután	20,000
Armenia	11,680
Aden and Dependencies	9,000
Palestine	9,000
Timor, etc. (Portuguese Indian Archipelago)	7,330
Cyprus	3,584
Goa, Damao, and Diu	1,638
Straits Settlements	1,600
Kwantung	538
Hong Kong and Dependencies	391
Wei-hai-wei	285
Bahrein Islands	250
French India (Pondicherry, etc.)	196
Kwang Chau Wan	190
Maldive Islands	115
Macao, etc.	4
Tientsin	1
Total, Asia	15,936,125
Africa—	
French Sahara	1,500,000
Anglo-Egyptian Sudan	1,014,400
French Equatorial Africa	982,049
Belgian Congo	909,654

AREA OF AUSTRALIA AND OF OTHER COUNTRIES—*continued.*

Country.	Area.
AFRICA—*continued.*	Sq. miles.
Tripolitania and Cyrenaica	1,260,980
Angola	484,800
South African Union	471,917
Portuguese East Africa	428,132
Italian Somaliland	405,000
Territory of the Niger	404,914
Egypt	383,000
Tanganyika Territory	365,000
French Sudan	356,471
Abyssinia	350,000
Nigeria and Protectorate	335,700
South-west Africa	312,194
Bechuanaland Protectorate	275,000
Madagascar	228,707
Algeria (inc. Algerian Sahara)	222,180
Morocco	210,825
Kenya Colony and Protectorate	208,320
Northern Rhodesia	187,950
Cameroon (French)	166,489
Mauritania	154,400
Upper Volta	154,400
Southern Rhodesia	149,000
Ivory Coast	121,590
Rio de Oro and Adrar	109,200
Uganda Protectorate	98,776
French Guinea	89,436
Gold Coast Protectorate (with Nth. Territories)	80,000
Senegal	74,112
British Somaliland	68,000
Tunis	48,300
Eritrea	45,754
Liberia	43.000
Dahomey	41,302
Nyasaland Protectorate	37,890
Cameroon (British)	31,000
Sierra Leone and Protectorate	31,000
Togoland (French)	22,000
Portuguese Guinea	13,940
Togoland (British)	12,600
Basutoland	11,716
Spanish Guinea (Rio Muni, etc.)	10,036
Spanish Morocco	7,700
Swaziland	6,678
French Somali Coast	5,790
Gambia and Protectorate	4,134
Cape Verde Islands	1,480
Sokotra	1,382
Zanzibar	1,020
Réunion	970
Ifni	965
Mauritius and Dependencies	809
AFRICA—*continued.*	Sq. miles.
Fernando Po, etc.	795
Comoro Islands, Mayotte, etc.	790
St. Thomas and Principe Islands	360
Seychelles	156
St. Helena	47
Ascension	34
Total, Africa	13,044,244
North and Central America and West Indies—	
Canada	3,797,123
United States	3,026,789
Mexico	767,198
Alaska	590,884
Newfoundland and Labrador	162,734
Nicaragua	51,660
(*a*)Greenland	46,740
Honduras	44,275
Cuba	44,164
Guatemala	42,353
Costa Rica	23,000
Santo Domingo	19,332
Salvador	13,176
Haiti	10,204
British Honduras	8,598
Jamaica, inc. Turks, Caicos and Cayman Is.	4,674
Bahamas	4,404
Porto Rico	3,435
Trinidad and Tobago	1,976
Leeward Islands	715
Guadeloupe and Dependencies	688
Windward Islands	516
Curaçao and Dependencies	403
Martinique	385
Barbados	166
Virgin Islands of U.S.A.	132
St. Pierre and Miquelon	93
Bermudas	19
Total, N. and C. America and W. Indies	8,665,836
South America—	
Brazil	3,285,318
Argentine Republic	1,153,119
Peru	532,047
Bolivia	514,155
Colombia (exc. of Panama)	440,846

(*a*) Danish colony only. Total area has been estimated as between 827,000 and 850,000 square miles.

AREA OF AUSTRALIA AND OF OTHER COUNTRIES—*continued.*

Country.	Area.
SOUTH AMERICA—*continued.*	Sq. miles.
Venezuela	393,874
Chile	290,084
Ecuador	174,155
British Guiana	89,480
Uruguay	72,153
Paraguay	61,647
Dutch Guiana	54,291
Panama	32,380
French Guiana	34,740
Falkland Islands and South Georgia ..	5,618
Panama Canal Zone ..	553
Total, South America ..	7,134,460
Australasia and Polynesia—	
Commonwealth of Australia	2,974,581
Dutch New Guinea ..	160,692
New Zealand and Dependencies	103,862
Papua	90,540
Territory of New Guinea	89,252
British Solomon Islands ..	11,000
AUSTRALASIA AND POLYNESIA —*continued.*	Sq. miles.
New Caledonia and Dependencies	8,548
Fiji	7,083
Hawaii	6,449
New Hebrides	5,700
French Establishments in Oceania	1,520
Territory of Western Samoa	1,250
Gilbert and Ellice Islands	1,011
Marianne, Caroline, and Marshall Islands ..	960
Tonga	385
Guam	210
Samoa (U.S.A. part) ..	62
Phœnix Group	16
Norfolk Island	13
Nauru Island	10
Pitcairn Island	2
Total, Australasia and Polynesia	3,463,146
British Empire	13,397,160

The figures quoted in the table have, in most cases, been extracted from the Statesman's Year Book for 1927.

3. **Areas of Political Subdivisions.**—As already stated, Australia consists of six States and the Northern and Federal Capital Territories. The areas of these, and their proportions of the total of Australia, are shown in the following table :—

AUSTRALIA—AREA OF STATES AND TERRITORIES.

State or Territory.	Area.	Percentage on Total
	Sq. miles.	%
New South Wales	309,432	10.40
Victoria	87,884	2.96
Queensland	670,500	22.54
South Australia	380,070	12.78
Western Australia	975,920	32.81
Tasmania	26,215	0.88
Northern Territory	523,620	17.60
Federal Capital Territory ..	940	0.03
Total	2,974,581	100.00

4. **Coastal Configuration.**—(i) *General.* There are no striking features in the configuration of the coast; the most remarkable indentations are the Gulf of Carpentaria on the north, and the Great Australian Bight on the south. The Cape York Peninsula on the extreme north is the only other remarkable feature in the outline. In Year Book No. 1, an numeration of the features of the coast-line of Australia was given (see pp. 60 to 68).

(ii) *Coast-line.* The lengths of coast-line, exclusive of minor indentations, of each State and of the whole continent, and the area per mile of coast-line, are shown in the following table :—

AUSTRALIA—COAST-LINE AND AREA PER MILE THEREOF.

State.	Coast-line.	Area per Mile of Coast-line.	State.	Coast-line.	Area per Mile of Coast-line.
	Miles.	Sq. miles.		Miles.	Sq. miles.
New South Wales(*a*)	700	443	South Australia	1,540	247
Victoria	680	129	Western Australia	4,350	224
Queensland . .	3,000	223	Continent (*b*) . .	11,310	261
Northern Territory	1,040	503	Tasmania . .	900	29

(*a*) Including Federal Capital Territory. (*b*) Area 2,948,366 square miles.

For the entire Commonwealth of Australia this gives a coast-line of 12,210 miles and an average of 244 square miles for one mile of coast-line. According to Strelbitski, Europe has only 75 square miles of area to each mile of coast-line, and, according to recent figures, England and Wales have only one-third of this, viz., 25 square miles.

(iii) *Historical Significance of Coastal Names.* It is interesting to trace the voyages of some of the early navigators by the names bestowed by them on various coastal features—thus Dutch names are found on various points of the Western Australian coast, in Nuyts' Archipelago, in the Northern Territory and in the Gulf of Carpentaria ; Captain Cook can be followed along the coasts of New South Wales and Queensland ; Flinders' track is easily recognized from Sydney southwards, as far as Cape Catastrophe, by the numerous Lincolnshire names bestowed by him ; and the French navigators of the end of the eighteenth and the beginning of the nineteenth century have left their names all along the Western Australian, South Australian, and Tasmanian coasts.

5. **Geographical Features of Australia.**—In each of the earlier issues of this Year Book fairly complete information has been given concerning some special geographical element. The nature of this information and its position in the various Year Books can be readily ascertained on reference to the special index following the index to maps and graphs at the end of this work.

6. **Fauna, Flora, Geology, and Seismology of Australia.**—Special articles dealing with these features have appeared in previous Year Books, but limits of space naturally preclude their repetition in each volume. As pointed out in 5 *supra*, however, the nature and position of these articles can be readily ascertained from the special index.

7. **Changing of German Place Names in Australia.**—A list of German place and district names in Australia which were changed during the Great War appeared in Year Book No. 19, pages 50 and 51. Limitations of space, however, preclude its repetition in this issue.

§ 2. Climate and Meteorology of Australia.[*]

1. **Introductory.**—In preceding Year Books some account was given of the history of Australian meteorology, including reference to the development of magnetic observations and the equipment for the determination of various climatological records. (See Year Book No. 3, pp. 79, 80.) In Year Book No. 4, pp. 84 and 87, will be found a short sketch of the creation and organization of the Commonwealth Bureau of Meteorology, and a résumé of the subjects dealt with at the Meteorological Conference of 1907. Space will not permit of the inclusion of this matter in the present issue.

2. **Meteorological Publications.**—The following publications are issued daily from the Central Meteorological Bureau, viz. :—(i) Weather charts. (ii) Rainfall maps. (iii) Bulletins, Victorian and Interstate, showing pressure, temperature, wind, rain, cloud extent, and weather. Similar publications are also issued from the divisional offices in each of the State Capitals.

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[*] Prepared from data supplied by the Commonwealth Meteorologist, H. A. Hunt, Esquire.

Commencing with January, 1910, the "Australian Monthly Weather Report," containing statistical records from representative selected stations, with rain maps and diagrams, etc., was published, but was suspended in September, 1913. Complete rainfall and other climatological data are published in volumes of meteorological statistics for each State separately.

The first text book of Australian meteorology, "Climate and Weather of Australia," was published in 1913.

In addition, seventeen Bulletins of Climatology have been published, particulars of which are given in preceding issues of the Official Year Book (see No. 13, page 53, and No. 19, page 51).

The following publications have since been issued :—

Instructions for Marine Meteorological Observers.
Annnal Average Rainfall Map of Australia (revised to 1924).

3. **General Description of Australia.**—A considerable portion (0.530) of three divisions of Australia is north of the tropic of Capricorn—that is to say, within the States of Queensland and Western Australia, and the Northern Territory, no less than 1,149,320 square miles belong to the tropical zone, and 1,020,720 to the temperate zone. The whole area of Australia within the temperate zone, however, is 1,825,261 square miles; thus the tropical part is about 0.386, or about five-thirteenths of the whole, or the "temperate" region is half as large again as the "tropical" (more accurately 1.588). By reason of its insular geographical position, and the absence of striking physical features, Australia is, on the whole, less subject to extremes of weather than are regions of similar area in other parts of the globe, and latitude for latitude Australia is, on the whole, more temperate.

The altitudes of the surface of Australia range up to a little over 7,300 feet, hence its climate embraces a great many features, from the characteristically tropical to what is essentially alpine, a fact indicated in some measure by the name Australian Alps given to the southern portion of the great Dividing Range.

On the coast, the rainfall is often abundant and the atmosphere moist, but in some portions of the interior it is very limited, and the atmosphere dry. The distribution of forest, therefore, with its climatic influence, is very uneven. In the interior, in places, there are fine belts of trees, but there are large areas also which are treeless, and where the air is hot and parching in summer. Again, on the coast, even so far south as latitude 35°, the vegetation is tropical in its luxuriance, and to some extent also in character. Climatologically, therefore, Australia may be said to present a great variety of features.

4. **Meteorological Divisions.**—(i) *General.* The Commonwealth Meteorologist has divided Australia, for climatological and meteorological purposes, into five divisions. The boundaries between these may be thus defined :—(*a*) Between divisions I. and II., the boundary between South and Western Australia, viz., the 129th meridian of east longitude; (*b*) between divisions II. and III., a line starting at the Gulf of Carpentaria, along the Norman River to Normanton, thence a straight line to Wilcannia on the Darling River, New South Wales; (*c*) between divisions II. and IV., a line from Wilcannia along the Darling River to its junction with the Murray; (*d*) between divisions II. and V., a line from the junction of the Darling and Murray Rivers, along the latter to Encounter Bay; (*e*) between divisions III. and IV., a line starting at Wilcannia, along the Darling, Barwon, and Dumaresq Rivers to the Great Dividing Range, and along that range and along the watershed between the Clarence and Richmond Rivers to Evans Head on the east coast of Australia; (*f*) between divisions IV. and V., a line from the junction of the Darling and Murray Rivers along the latter to its junction with the Murrumbidgee, along the Murrumbidgee to the Tumut River, and along the Tumut River to Tumut, thence a straight line to Cape Howe: (*g*) Tasmania is included in division V.

The population included within these boundaries at the Census of the 4th April, 1921, was approximately as follows :—

Division	I.	II.	III.	IV.	V.
Population	332,000	500,000	824,000	1,915,000	1,866,000

In these divisions, the order in which the capitals occur is as follows :—(*a*) Perth, (*b*) Adelaide, (*c*) Brisbane, (*d*) Sydney, (*e*) Melbourne, and (*f*) Hobart; and the climatological and meteorological statistics relating to the capital cities are dealt with herein in accordance with that order.

(ii) *Special Climatological Stations.* The latitudes, longitudes, and altitudes of special stations, the climatological features of which are graphically represented hereinafter are as follows :—

SPECIAL CLIMATOLOGICAL STATIONS—AUSTRALIA.

Locality.	Height above Sea Level.	Latitude. S.		Longitude. E.		Locality.	Height above Sea Level.	Latitude. S.		Longitude. E.	
	Feet.	deg.	min.	deg.	min.		Feet.	deg.	min.	deg.	min.
Perth ..	197	31	57	115	50	Darwin ..	97	12	28	130	51
Adelaide ..	140	34	56	138	35	Daly Waters	691	16	16	133	23
Brisbane ..	137	27	28	153	2	Alice Springs	1,926	23	38	133	37
Sydney ..	138	33	52	151	12	Dubbo ..	870	32	18	148	35
Melbourne ..	115	37	49	144	58	Laverton, W.A.	1,530	28	40	122	23
Hobart ..	177	42	53	147	20	Coolgardie ..	1,389	30	57	121	10

5. **Temperatures.**—(i) *Comparisons with other Countries.* In respect of Australian temperatures generally, it may be pointed out that the isotherm for 70° Fahrenheit extends in South America and South Africa so far south as latitude 33°, while in Australia it reaches only so far south as latitude 30°, thus showing that, on the whole, Australia has latitude for latitude a more temperate climate than other places in the Southern Hemisphere.

The comparison is even more favourable when the Northern Hemisphere is included, for in the United States the 70° isotherm extends in several of the western States so far north as latitude 41°. In Europe, the same isotherm reaches almost to the southern shores of Spain, passing, however, afterwards along the northern shores of Africa till it reaches the Red Sea, when it bends northward along the eastern shore of the Mediterranean till it reaches Syria. In Asia, nearly the whole of the land area south of latitude 40° N. has a higher temperature than 70°.

The extreme range of shade temperatures in summer and winter in a very large part of Australia amounts to probably only 81°. In Siberia, in Asia, the similar range is no less than 171°, and in North America 153°, or approximately double the Australian range.

Along the northern shores of Australia the temperatures are very equable. At Darwin, for example, the difference in the means for the hottest and coldest months is only 8.4°, and the extreme readings for the year, or the highest maximum in the hottest month and the lowest reading in the coldest month, show a difference of under 50°.

Coming southward, the extreme range of temperature increases gradually on the coast, and in a more pronounced manner inland.

(ii) *Hottest and Coldest Parts.* A comparison of the temperatures recorded at coast and inland stations shows that, in Australia, as in other continents, the range increases with increasing distance from the coast.

In the interior of Australia, and during exceptionally dry summers, the temperature occasionally reaches or exceeds 120° in the shade, and during the dry winters the major portion of the country to the south of the tropics is subject to ground frosts. An exact knowledge of temperature disposition cannot be determined until the interior becomes more settled, but from data procurable it would appear that the hottest area of the continent is situated in the northern part of Western Australia about the Marble Bar and Nullagine goldfields, where the maximum shade temperature during the summer sometimes exceeds 100° continuously for days and weeks. The coldest part of Australia is the extreme south-east of New South Wales and extreme east of Victoria—the region of the Australian Alps. Here the temperature seldom, if ever, reaches 100° even in the hottest of seasons.

Tasmania as a whole enjoys a most moderate and equable range of temperature throughout the year, although occasionally hot winds may cross the Straits and cause the temperature to rise to 100° in the low-lying parts.

(iii) *Monthly Maximum and Minimum Temperatures.* The normal monthly maximum and minimum temperatures can be best shown by means of graphs, which exhibit the nature of the fluctuation of each for all available years. In the diagram herein for nine representative places in Australia, the upper heavy curves show the mean maximum, and the lower heavy curves the mean minimum temperatures based upon daily observations, while the other curves show the humidities.

6. **Humidity.**—After temperature, humidity is the most important element of climate, as regards its effect on human comfort, rainfall supply, and in connexion with engineering problems generally.

In this publication the *absolute humidity* has been graphically represented in the form of inches of vapour pressure (i.e. that portion of the barometric pressure due to vapour). It is this total quantity of moisture in the air which affects personal comfort, plays an important part in varying the density of the atmosphere, and in heating and refrigerating processes. The more commonly quoted value, called the *relative humidity,* refers to the ratio which the actual moisture contents of the air bear to the total amount possible if saturation existed at the given temperature, and is usually quoted as a percentage. The relative humidity is an important factor in all drying operations, but is much less important than the absolute humidity as affecting animal life.

The mean monthly vapour pressure has also been added to the tables of climatological data for the capital cities included herein.

The normal monthly values of vapour pressure, it should be noted, combine to make the annual curve for this element which is comparable with the maximum and minimum temperature curves, but the relative humidities consisting as they do of the extremes for each month, do not show the normal annual fluctuation which would be approximately midway between the extremes.

The order of stations in descending values of vapour pressure is Darwin, Daly Waters, Brisbane, Sydney, Perth, Adelaide, Melbourne, Hobart and Alice Springs, while the relative humidity diminishes in the order, Sydney, Hobart, Darwin, Brisbane, Melbourne, Perth, Adelaide, Daly Waters and Alice Springs.

7. **Evaporation.**—(i) *General.* The rate and quantity of evaporation in any territory is influenced by the prevailing temperature, and by atmospheric humidity, pressure, and movement. In Australia, the question is of perhaps more than ordinary importance, since in its drier regions water has often to be conserved in "tanks"* and dams. The magnitude of the economic loss by evaporation will be appreciated from the tabular records herein, which show that the yearly amount varies from about 32 inches at Hobart to 94 inches at Alice Springs in the centre of the Continent. Over the *inland* districts of the Continent it has been calculated that evaporation equals the rainfall where the annual totals are about 36 inches, the variations above and below this quantity being inverse.

(ii) *Monthly Evaporation Curves.* The curves showing the mean monthly evaporation in various parts of Australia disclose how characteristically different are the amounts for the several months in different localities. The evaporation for representative places is shown on the diagram herein.

(iii) *Loss by Evaporation.* In the interior of Australia the possible evaporation is greater than the actual rainfall. Since the loss by evaporation depends largely on the exposed area, tanks and dams so designed that the surface shall be a minimum are advantageous. Further, the more protected from the direct rays of the sun and from winds, by means of suitable tree planting, the less will be the loss by evaporation. These matters are naturally of more than ordinary concern in the drier districts of Australia.

8. **Rainfall.**—(i) *General.* As even a casual reference to climatological maps indicating the distribution of rainfall and prevailing direction of wind would clearly show, the rainfall of any region is determined mainly by the direction and route of the prevailing winds, by the varying temperatures of the earth's surface over which they blow, and by the physiographical features generally.

Australia lies within the zones of the south-east trades and prevailing westerly winds. The southern limit of the south-east trade strikes the eastern shores at about 30° south latitude, and, with very few exceptions, the heaviest rains of the Australian continent are precipitated along the Pacific slopes to the north of that latitude, the varying quantities being more or less regulated by the differences in elevation of the shores and of the chain of mountains upon which the rain-laden winds blow from the New South Wales northern border to Thursday Island. The converse effect is exemplified on the north-west coast of Western Australia, where the prevailing winds, blowing from the interior of the continent instead of from the ocean, result in the lightest coastal rain in Australia.

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* In Australia, artificial storage ponds or reservoirs are called "tanks."

The westerly winds, which skirt the southern shores, are responsible for the very reliable, although generally light to moderate, rains enjoyed by the south-western portion of Western Australia, by the south-eastern agricultural areas of South Australia, by a great part of Victoria, and by the whole of Tasmania.

(ii) *Factors determining Distribution and Intensity of Rainfall.* (iii) *Time of Rainfall.* In Official Year Book No. 6 (see pp. 72 to 74) some notes were given of the various factors governing the distribution, intensity, and period of Australian rainfall.

(iv) *Wettest and Driest Regions.* The wettest known part of Australia is on the north-east coast of Queensland, between Port Douglas and Cardwell, where three stations situated on, or adjacent to, the Johnstone and Russell Rivers have an average annual rainfall of between 144 and 165 inches. The maximum and minimum falls there are :—Goondi, 241.53 in 1894 and 67.88 inches in 1915, or a range of 173.65 inches ; Innisfail, 211.24 in 1894 and 69.87 inches in 1902, or a range of 141.37 inches ; Harvey Creek, 254.77 in 1921 and 80.47 inches in 1902, or a range of 174.30 inches.

On four occasions more than 200 inches have been recorded at Goondi, the last of these being in 1910, when 204.82 inches were registered. The record at this station covers a period of 34 years.

Harvey Creek, in the shorter period of 26 years has three times exceeded 200 inches, the total for 1921 being 254.77 inches, and at the South Johnstone Sugar Experiment Station, where a gauge has recently been established, 202.52 inches were recorded in 1921.

In Tasmania the wettest part is in the West Coast region, the mean annual rainfall at Lake Margaret being 145.34, with a maximum of 175.12 in 1924.

The driest known part of the continent is in the Lake Eyre district in South Australia (the only part of the continent below sea level), where the annual average is only 5 inches, and where the fall rarely exceeds 10 inches for the twelve months.

The inland districts of Western Australia were at one time regarded as the driest part of Australia, but authentic observations in recent years over the settled districts in the east of that State show that the annual average is from 10 to 12 inches.

(v) *Quantities and Distribution of Rainfall.* The departure from the normal rainfall increases progressively from the southern to the northern shores of the continent, and similarly also at all parts of the continent subject to capricious monsoonal rains, as the comparisons hereunder will show. The general distribution is best seen from the rainfall map herein, which shows the areas subject to average annual rainfalls lying between certain limits. The areas enjoying varying quantities of rainfall determined from the latest available information are shown in the following table :—

AVERAGE ANNUAL RAINFALL DISTRIBUTION.

Average Annual Rainfall.	N.S.W. (a)	Victoria.	Queensland.	South Australia	Northern Territory	Western Australia.	Tasmania. (b)	Total. (b)
	sqr. mls.	sqr. mls.	sqr. mls.	sqr. mls.	sqr. mls.	sqr. mls.	sqr. mls.	sqr. mls.
Under 10 inches	48,749	nil	80,496	310,669	140,500	486,952	nil	1,067,357
10—15 ,,	78,454	19,270	81.549	36.460	132,780	255,092	nil	603,605
15—20 ,,	55,762	13,492	111,833	19,940	63.026	94.101	304	358,458
20—25 ,,	45,140	14,170	143.610	8,620	49,157	44,340	3.844	308,881
25—30 ,,	30,539	15,579	99,895	3,258	41,608	31,990	3.016	225,885
30—40 ,,	33,557	14,450	61.963	1,036	37,642	59.520	5,027	213,195
Over 40 ,,	18,171	10,923	91,154	96	58,907	3,925	11,247	194,423
Total area ..	310,372	87,884	670,500	380,070	523,620	975,920	23,438	2,971,804

(a) Including Federal Capital Territory. (b) Over an area of 2,777 square miles no records are available.

Referring first to the capital cities, the records of which are given in the next table, it will be seen that Sydney, with a normal rainfall of 47.46 inches, occupies the chief place ; Brisbane, Perth, Melbourne, Hobart and Adelaide following in that order, Adelaide with 21.18 inches being the driest. The extreme range from the wettest to the driest year is greatest at Brisbane (72.09 inches) and least at Adelaide (19.48 inches).

In order to show how the rainfall is distributed throughout the year in various parts of the continent, the figures for representative towns have been selected. (See map.) The figures for Darwin, typical of the Northern Territory, show that nearly the whole of the rainfall occurs there in the summer months, while little or none falls in the middle of the year. The figures for Perth, as representing the south-western part of the continent, are the reverse, for while the summer months are dry, the winter ones are very wet. In Melbourne and Hobart the rain is fairly well distributed throughout the twelve months, with a maximum in October for the former, and in November for the latter. The records at Alice Springs and Daly Waters indicate that in the central parts of Australia the wettest months are in the summer and autumn. In Queensland, as in the Northern Territory, the heaviest rains fall in the summer months, but good averages are also maintained during the other seasons.

On the coast of New South Wales, the first six months of the year are the wettest, with a maximum in the autumn; the averages during the last six months are fair, and moderately uniform. Generally it may be said that approximately one-third of the area of the continent, principally in the eastern and northern parts, enjoys an annual average rainfall of from 20 to 50 or more inches, the remaining two-thirds averaging from 5 to 20 inches.

(vi) *Curves of Rainfall and Evaporation.* The relative amounts of rainfall and evaporation at different times through the year are clearly indicated in the graphs herein. Inspection thereof will show how large is the evaporation when water is fully exposed to the direct rays of the sun and to wind.

(vii) *Tables of Rainfall.* The table of rainfall for a long period of years for each of the various Australian capitals affords information as to the variability of the fall in successive years, and the list of the more remarkable falls furnishes information as to what may be expected on particular occasions. As pointed out in 4 *ante*, the capitals are dealt with in the order in which they occur in the adopted meteorological divisions.

RAINFALL—AUSTRALIAN CAPITAL CITIES, 1901 TO 1927.

Year.	PERTH.			ADELAIDE.			BRISBANE.			SYDNEY.			MELBOURNE.			HOBART.		
	Amount.	No. of Days.	10 Years' Means.	Amount.	No. of Days.	10 Years' Means.	Amount.	No. of Days.	10 Years' Means.	Amount.	No. of Days.	10 Years' Means.	Amount.	No. of Days.	10 Years' Means.	Amount.	No. of Days.	10 Years' Means.
	in.		in.	in.		in.	in.		in.	in.		in.	in.		in.	in.		in.
1901	36.75	122	..	18.01	124	..	38.48	110	..	40.10	149	..	27.45	113	..	25.11	149	
2	27.06	93	..	16.02	123	..	16.17	87	..	43.07	180	..	23.08	102	..	21.85	150	..
3	35.69	140	..	25.47	134	..	49.27	136	..	38.62	173	..	28.43	130	..	25.86	139	..
4	34.35	125	..	20.31	117	..	33.23	124	..	45.93	158	..	29.72	128	..	22.41	139	..
5	34.61	116	..	22.28	131	..	36.76	108	..	35.03	145	..	25.64	129	..	32.09	168	..
6	32.37	121	..	26.51	127	..	42.85	125	..	31.89	160	..	22.29	114	..	23.31	155	..
7	40.12	132	..	17.78	125	..	31.46	119	..	31.32	132	..	22.26	102	..	25.92	166	..
8	30.52	106	34.05	24.56	125	21.15	44.01	125	36.55	45.65	167	43.41	17.72	130	25.36	16.50	148	23.29
9	39.11	107	..	27.69	138	..	34.06	111	..	32.45	177	..	25.86	171	..	27.29	170	..
1910	37.02	135	..	24.62	116	..	49.00	133	..	46.91	160	..	24.61	167	..	25.22	205	..
11	23.38	108	..	15.99	127	..	35.21	128	..	50.24	155	..	36.61	168	..	26.78	193	..
12	27.85	123	..	19.57	116	..	41.30	114	..	47.51	172	..	20.37	157	..	23.14	181	..
13	38.28	141	..	18.16	102	..	40.81	115	..	57.70	141	..	21.17	157	..	19.36	165	..
14	20.21	128	..	11.39	91	..	33.99	141	..	56.42	149	..	18.57	129	..	15.42	154	..
15	43.61	164	..	19.38	117	..	25.66	93	..	34.83	117	..	20.95	167	..	20.91	196	..
16	35.16	128	..	28.16	142	..	52.80	136	..	44.91	161	..	38.04	170	..	43.39	203	..
17	45.64	146	..	28.90	153	..	40.92	127	..	52.40	151	..	30.57	171	..	30.62	214	..
18	39.58	138	34.98	17.41	107	21.13	24.95	121	37.87	42.99	149	46.64	27.13	160	26.39	26.04	179	25.82
19	30.66	120	..	17.21	108	..	19.36	96	..	58.71	152	..	24.89	141	..	22.48	153	..
20	40.35	124	..	26.70	119	..	39.72	122	..	43.42	159	..	28.27	162	..	18.00	182	..
21	41.09	135	..	22.64	100	..	54.31	167	..	43.34	140	..	29.76	154	..	18.04	159	..
22	31.86	135	..	23.20	117	..	35.82	109	..	39.35	136	..	25.02	151	..	28.27	189	..
23	44.47	134	..	29.79	139	..	23.27	93	..	37.01	123	..	22.64	158	..	32.93	198	..
24	33.79	119	..	23.44	143	..	41.08	114	..	37.01	136	..	36.48	171	..	28.76	197	..
25	31.41	126	..	21.91	118	..	53.10	139	..	50.35	145	..	17.57	144	..	22.40	171	..
26	49.22	167	..	22.20	116	..	30.82	111	..	37.07	127	..	20.81	149	..	25.79	187	..
27	36.59	133	..	16.92	101	..	62.08	130	..	48.56	138	..	17.98	135	..	20.02	183	..
Aver.	34.37	121	..	21.18	123	..	45.30	129	..	47.82	153	..	26.04	138	..	23.79	150	..
No. of Yrs.	52	52	..	89	89	..	78	68	..	88	88	..	84	72	..	85	85	..

NOTE.—The above average rainfall figures for Brisbane, Sydney, and Melbourne differ slightly from the mean annual falls given in the Climatological Tables, which are for a less number of years. Annual totals from 1860 to 1900 inclusive will be found in Official Year Book No. 15, page 53.

9. Remarkable Falls of Rain.—The following are the more remarkable falls of rain in the various States and in the Northern Territory, which have occurred within a period of twenty-four hours. In New South Wales and Queensland falls of less than 15 inches in the twenty-four hours are not included. Reference, however, to them may be found in preceding Official Year Books (see No. 14, pp. 60–63) :—

HEAVY RAINFALLS—NEW SOUTH WALES, UP TO 1927, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		ins.			ins.
Anthony ..	28 Mar., 1887	17.14	Dapto	11 May, 1925	15.00
Araluen	27 May, 1925	15.83	Kembla Heights ..	13 Jan., 1911	17.46
Bega	27 Feb., 1919	17.88	Madden's Creek ..	13 Jan., 1911	18.68
Broger's Creek ..	14 ,, 1898	20.05	Morpeth ..	9 Mar., 1893	21.52
,, ,, ..	13 Jan., 1911	20.83	Mount Kembla ..	13 Jan., 1911	18.25
Bulli Mountain ..	13 Dec., 1898	17.14	Numbugga .	27 Feb., 1919	17.87
Bulah Delah ..	16 Apr., 1927	19.80	Tongara Farm ..	14 ,, 1898	15.12
Burragate ..	27 Dec., 1919	16.38	Towamba ..	5 Mar., 1893	20.00
Candelo	27 Feb., ,,	18.58	South Head (near Sydney) ..	29 Apr., 1841	20.12
Condong ..	27 Mar., 1887	18.66	,, ,, ..	16 Oct., 1844	20.41
Cordeaux River ..	14 Feb., 1898	22.58			

HEAVY RAINFALLS—QUEENSLAND, UP TO 1927, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		ins.			ins.
Anglesey ..	26 Dec., 1909	18.20	Flying Fish Point	7 Apr., 1912	16.06
Atherton (Cairns) ..	31 Jan., 1913	16.69	,, ,, ,,	31 Jan., 1913	16.10
Babinda (Cairns) ..	1 Feb., ,,	20.51	Gadgarra ..	10 Feb., 1927	15.00
,, ,, ..	24 Jan., 1916	22.30	Gladstone ..	4 Feb , 1911	18.83
,, ,, ..	21 Apr., 1920	16.05	Glen Boughton ..	5 Apr., 1894	18.50
Babinda	25 Mar., 1921	15.76	Goldsborough (Cairns) ..	31 Jan., 1913	19.92
,, ...	14 Feb., 1927	15.20	Goondi Mill (Innisfail) ..	6 Apr., 1894	15.69
Banyan	1 Mar., 1925	16.43	,, ,, ..	29 Dec., 1903	17.83
Bloomsbury ..	14 Feb., 1893	17.40	,, ,, ..	10 Feb., 1911	17.68
,, ..	10 Jan., 1901	16.62	,, ,, ..	6 Apr., 1912	15.55
Brisbane ..	21 ,, 1887	18.31	Goondi	30 Jan., 1913	24.10
Buderim Mountain	11 ,, 1898	26.20	Goorganga ..	23 ,, 1918	18.17
Bundaberg ..	16 ,, 1913	16.94	Halifax	5 Feb., 1899	15.37
Burnett Heads (Bundaberg) ..	16 ,, 1913	15.22	,, ...	6 Jan., 1901	15.68
Cairns	11 Feb., 1911	15.17	Hambledon Mill ..	2 ,, 1911	18.61
,, ...	2 Apr., ,,	20.16	,, ,, ..	1 Apr., ,,	19.62
Carbrook ..	23 Jan., 1918	22.66	,, ,, ..	30 Jan., 1913	17.32
,, ..	24 Jan., 1918	15.77	Hampden ..	23 Apr., 1918	17.30
Cardwell ..	18 Mar., 1904	18.24	,, ..	24 ,, ,,	17.19
,, ...	11 Mar., 1918	16.65	Harvey Creek ..	8 Mar., 1899	17.72
Carmila	23 Jan., 1918	15.92	,, ,, ..	11 Jan., 1905	16.96
Clare	26 ,, 1896	15.30	,, ,, ..	3 ,, 1911	27.75
Clump Point ..	12 Feb., 1927	15.79	,, ,, ..	2 Apr., ,,	16.46
Collaroy	23 Jan., 1918	18.06	,, ,, ..	31 Jan., 1913	21.72
Crohamhurst (Blackall Range)	2 Feb., 1893	35.71	,, ,, ..	25 Mar., 1921	15.80
,, ,,	9 Jan., 1898	19.55	,, ,, ..	12 Mar., 1924	16.50
,, ,,	6 Mar., ,,	16.01	,, ,, ..	13 Mar., ,,	15.78
Croydon	29 Jan., 1908	15.00	Haughton Valley ..	26 Jan., 1896	18.10
Dantulla ..	13 Feb., 1927	17.09	Holmwood (Woodford)	2 Feb., 1893	16.19
Dungeness ..	16 Mar., 1893	22.17	Howard ..	15 Jan., 1905	19.55
Dunira	9 Jan., 1898	18.45	Huntley ..	27 Dec., 1916	18.94
,, ...	6 Mar., ,,	15.95	Innisfail (formerly Geraldton) ..	11 Feb., 1889	17.13
Dunwich	8 May, 1925	15.46	,, ,, ..	6 Apr., 1894	16.02
Fairymead Plantation (Bundaberg)	16 Jan., 1913	15.32			

HEAVY RAINFALLS—QUEENSLAND—*continued.*

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		ins.			ins.
Innisfail (formerly Geraldton)	24 Jan., 1900	15.22	Mourilyan	31 Jan., 1913	15.05
,, ,,	29 Dec., 1903	21.22	Mundoolun	21 ,, 1887	17.95
,, ,,	2 Apr., 1911	15.00	Nambour	9 ,, 1898	21.00
,, ,,	7 ,, 1912	20.50	,,	27 Dec., 1909	16.80
,, ,,	31 Jan., 1913	20.91	Netherdale	22 Jan., 1918	19.50
Kamerunga (Cairns)	2 Apr., 1911	21.00	Oxenford	14 Mar., 1908	15.65
,, ,,	31 Jan., 1913	16.00	Palmwoods	10 Jan., 1898	15.85
Koumala	23 ,, 1918	22.31	,,	25 Dec., 1909	17.75
,,	24 ,, ,,	20.65	Pialba (Marybor'gh)	16 Jan., 1913	17.22
Kuranda (Cairns)	11 Feb., 1911	16.30	Plane Creek (Mackay)	26 Feb., ,,	27.73
,, ,,	17 Mar., ,,	15.10	Port Douglas	10 Mar., 1904	16.34
,, ,,	31 ,, ,,	18.60	,, ,,	17 ,, 1911	16.10
,, ,,	1 Apr., ,,	24.30	,, ,,	1 Apr., ,,	31.53
,, ,,	2 ,, ,,	28.80	Proserpine	23 Jan., 1918	18.17
,, ,,	31 Jan., 1913	16.34	Ravenswood	24 Mar., 1890	17.00
Landsborough	2 Feb., 1893	15.15	Redcliffe	16 Feb., 1893	17.35
Low Island	10 Mar., 1904	15.07	Rosedale	16 Jan., 1913	18.90
,,	1 Apr., 1911	15.30	Sarina	23 ,, 1918	22.60
Lyndon (*via* Brixton)	3 ,, 1917	17.00*a*	St. Lawrence	30 ,, 1896	15.00
Mackay	21 Jan., 1918	24.70*b*	The Hollow (Mackay)	23 Feb., 1888	15.12
,,	22 ,, ,,	17.25*c*	Thornborough	20 Apr., 1903	18.07
Sugar Experimental Farm, Mackay	21 ,, ,,	16.80	Townsville	24 Jan., 1892	19.20
,,	22 ,, ,,	17.20	,,	28 Dec., 1903	15.00
Macnade Mill	5 Feb., 1899	15.20	Tully	10 Feb., 1927	15.06
,,	6 Jan., 1901	23.33	,,	12 ,, ,,	23.86
,,	4 Mar., 1915	22.00	Victoria Mill	6 Jan., 1901	16.67
Mapleton	26 Dec., 1909	15.72	Woodlands (Yepp'n)	31 ,, 1893	23.07
Mirani	12 Jan., 1901	16.59	Wootha	10 Feb., 1915	15.93
Miriam Vale (B'berg)	17 ,, 1913	15.80	Yandina	1 ,, 1893	20.08
Mooloolah	13 Mar., 1892	21.53	,,	9 Jan., 1898	19.25
,,	2 Feb., 1893	19.11	,,	28 Dec., 1909	15.80
Mossman	14 ,, 1927	15.75	Yarrabah	2 Apr., 1911	30.65
Mount Cuthbert	8 Jan., 1911	18.00	,,	24 Jan., 1916	27.20
Mount Molloy	31 Mar., ,,	20.00	,,	25 ,, ,,	18.60
,,	1 Apr., ,,	20.00	Yeppoon	31 ,, 1893	20.05
,,	2 ,, ,,	20.00	,,	8 ,, 1898	18.05
Mourilyan	11 Feb., 1911	17.40	,,	8 Oct., 1914	21.70
,,	7 Apr., 1912	18.97			

HEAVY RAINFALLS—WESTERN AUSTRALIA, UP TO 1927, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		ins.			ins.
Alice Downs	15 Mar., 1922	10.58	Exmouth Gulf	2 Feb., 1918	12.50
Balla Balla	21 ,, 1899	14.40	Fortescue	3 May, 1890	23.36
Bamboo Creek	22 ,, ,,	10.10	Frazier Downs	3 Mar., 1916	11.25
Boodarie	3 Jan., 1896	10.03	Gnaraloo	20 ,, 1923	11.00
,,	21 ,, ,,	14.53	Kerdiadary	7 Feb., 1901	12.00
Booloogooroo	17 ,, 1923	10.96	Meda	2 Mar., 1916	10.55
Broome	6 Jan., 1917	14.00	Millstream	5 ,, 1900	10.00
Carlton	11 ,, 1903	10.64	Minilya	15 Jan., 1923	11.50
Cossack	3 Apr., 1898	12.82	Obagama	28 Feb., 1910	12.00
,,	16 ,, 1900	13.23	,,	24 Dec., 1920	13.02
Croydon	3 Mar., 1903	12.00	Pilbara	2 Apr., 1898	14.04
Derby	29 Dec., 1898	13.09	Point Cloates	20 Jan., 1909	10.87
,,	7 Jan., 1917	16.47	Point Torment	17 Dec., 1906	11.86

[a] Mr. Jas. Laidlaw, of Lyndon, states that this fell in 4 hours. [b] 37½ hours. [c] 22½ hours.

HEAVY RAINFALLS, WESTERN AUSTRALIA—*continued.*

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		ins.			ins.
Port George IV.	17 Jan., 1915	11.24	Whim Creek	21 Mar., 1899	18.17
Roebourne	3 Apr., 1898	11.44	,, ,,	6 ,, 1900	10.03
,,	6 Mar., 1900	10.32	,, ,,	3 ,, 1903	10.44
Roebuck Plains	5 Jan., 1917	14.01	Winderrie	17 Jan., 1923	14.23
,, ,,	6 ,, ,,	22.36	Woodstock	21 ,, 1912	13.00
Springvale	14 Mar., 1922	12.25	Wyndham	27 Jan., 1890	11.60
Tambray	6 ,, 1900	11.00	,,	4 Mar., 1919	12.50
,,	3 ,, 1903	10.47	Yardie Creek	3 Feb., 1918	10.00
Thangoo	17-19 Feb. '96	24.18	Yeeda	2 Mar., 1916	10.70
,,	28 Dec., 1898	11.15	,,	6 Jan., 1917	10.20
Whim Creek	3 Apr., 1898	29.41	,,	7 ,, ,,	11.75

HEAVY RAINFALLS—NORTHERN TERRITORY, UP TO 1927, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		ins.			ins.
Bathurst Island Mission	7 Apr., 1925	11.85	Cosmopolitan Gold Mine	24 Dec., 1915	10.60
Bonrook	24 Dec., 1915	10.60	Darwin	7 Dec., 1915	11.67
Borroloola	14 Mar., 1899	14.00	Groote Eylandt	30-31 Mar., '23	12.00*a*
Brock's Creek	4 Jan., 1914	10.68	Lake Nash	21 Mar., 1901	10.25
,, ,,	24 Dec., 1915	14.33	Pine Creek	8 Jan., 1897	10.35
Burrundie	4 Jan., 1914	11.61			

(*a*) Approximate only, as gauge was washed away.

HEAVY RAINFALLS—SOUTH AUSTRALIA, UP TO 1927, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		ins.			ins.
Wilmington	28 Feb., 1921	3.97	Wilmington	1 Mar., 1921	7.12

HEAVY RAINFALLS—VICTORIA, UP TO 1927, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		ins.			ins.
Balook	26 Sept.,1917	5.32	Mt. Buffalo	6 June, 1917	8.53
,,	27 ,, ,,	7.23	,,	7 ,, ,,	6.56
,,	28 ,, ,,	2.08			

HEAVY RAINFALLS—TASMANIA, UP TO 1927, INCLUSIVE.

Name of Town or Locality.	Date.	Amnt.	Name of Town or Locality.	Date.	Amnt.
		ins.			ins.
Cullenswood	5 June, 1923	10.50	Mathinna	8-10 Mar., '11	15.79
Gould's Country	8-10 Mar., '11	15.33	The Springs	30-31 Jan., '16	10.75
Lottah	8-10 ,, ,,	18.10	Triabunna	5 June, 1923	10.20

10. Snowfall.—Light snow has been known to fall occasionally so far north as latitude 31° S., and from the western to the eastern shores of the continent. During exceptional seasons, it has fallen simultaneously over two-thirds of the State of New South Wales, and has extended at times along the whole of the Great Dividing Range, from its southern extremity in Victoria so far north as Toowoomba in Queensland. During the winter, for several months, snow covers the ground to a great extent on the Australian Alps, where also the temperature falls below zero Fahrenheit during the night. In the ravines around Kosciusko and similar localities the snow never entirely disappears.

The antarctic "V"-shaped disturbances are always associated with the most pronounced and extensive snowfalls. The barometric gradients are very steep where the "trough line" extends northward, and the apexes are unusually sharp-pointed, and protrude into very low latitudes, sometimes even to the tropics.

11. Hail.—Hail falls most frequently along the southern shores of the continent in the winter, and over south-eastern Australia during the summer months. The size of the hailstones generally increases with distance from the coast, a fact which lends strong support to the theory that hail is brought about by ascending currents. A summer rarely passes without some station experiencing a fall of stones exceeding in size an ordinary hen-egg, and many riddled sheets of light-gauge galvanized iron bear evidence of the weight and penetrating power of the stones.

The hailstorms occur most frequently when the barometric readings indicate a flat and unstable condition of pressure They are almost invariably associated with tornadoes or tornadic tendencies, and on the east coast the clouds from which the stones fall are generally of a remarkable sepia-coloured tint.

12. Barometric Pressures.—The mean annual barometric pressure (corrected to sea-level and standard gravity) in Australia varies from 29.80 inches on the north coast to 29.92 inches over the central and 30.03 inches in the southern parts of the continent. In January, the mean pressure ranges from 29.70 inches in the northern and central areas to 29.95 inches in the southern. The July mean pressure ranges from 29.90 inches at Darwin to 30.12 inches at Alice Springs. Barometer readings corrected to mean sea-level and standard gravity have, under anticyclonic conditions in the interior of the continent, ranged as high as 30.77 inches (at Kalgoorlie on the 28th July, 1901) and have fallen as low as 27.55 inches. This lowest record was registered at Mackay during a tropical hurricane on the 21st January, 1918. An almost equally abnormal reading of 27.88 inches was recorded at Innisfail during a similar storm on the 10th March, 1918. The mean annual fluctuations of barometric pressure for the capitals of Australia are shown on the graph herein.

13. Wind.—Notes on the distinctive wind currents in Australia were given in preceding Year Books (see No. 6, page 83), but, owing to limitations of space, have not been included herein.

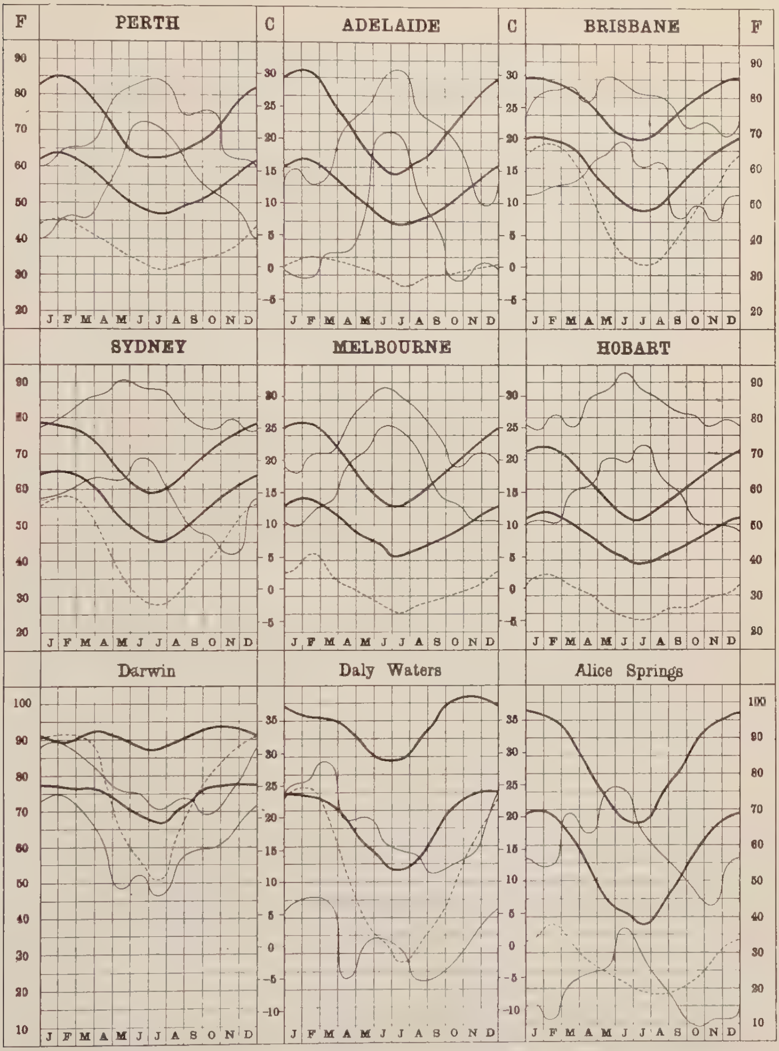
14. Cyclones and Storms.—The "elements" in Australia are ordinarily peaceful, and while destructive cyclones have visited various parts, more especially coastal areas, such visitations are rare, and may be properly described as erratic.

During the winter months, the southern shores of the continent are subject to cyclonic storms, evolved from the V-shaped depressions of the southern low-pressure belt. They are felt most severely over the south-western parts of Western Australia, to the south-east of South Australia, in Bass Strait, including the coast line of Victoria, and on the west coast of Tasmania. Apparently the more violent wind pressures from these cyclones are experienced in their northern half, or in that part of them which has a north-westerly to a south-westerly circulation.

The north-east coast of Queensland is occasionally visited by hurricanes from the north-east tropics. During the first four months of the year, these hurricanes appear to have their origin in the neighbourhood of the South Pacific Islands, their path being a parabolic curve first to the S.W. and finally towards the S.E. Only a small percentage, however, reach Australia, the majority recurving in their path to the east of New Caledonia.

Very severe cyclones, locally known as "willy willies," are peculiar to the north-west coast of Western Australia from the months of November to April inclusive. They apparently originate in the ocean in the vicinity of Cambridge Gulf, and travel in a south-westerly direction with continually increasing force, displaying their greatest energy near Cossack and Onslow, between latitudes 20° and 22° South. The winds in these

ANNUAL FLUCTUATIONS OF NORMAL MAXIMUM AND MINIMUM TEMPERATURE AND HUMIDITY.



EXPLANATION.—The upper and lower heavy lines in each graph represent the maximum and minimum temperatures respectively. The Fahrenheit temperature scales are shown on the outer edge of the sheet under " F." and the centigrade scales in the two inner columns under " C."

The broken line shows the normal absolute humidity in the form of 9 a.m. vapour pressures for which the figures in the outer " F " columns represent hundredths of an inch of barometric pressure.

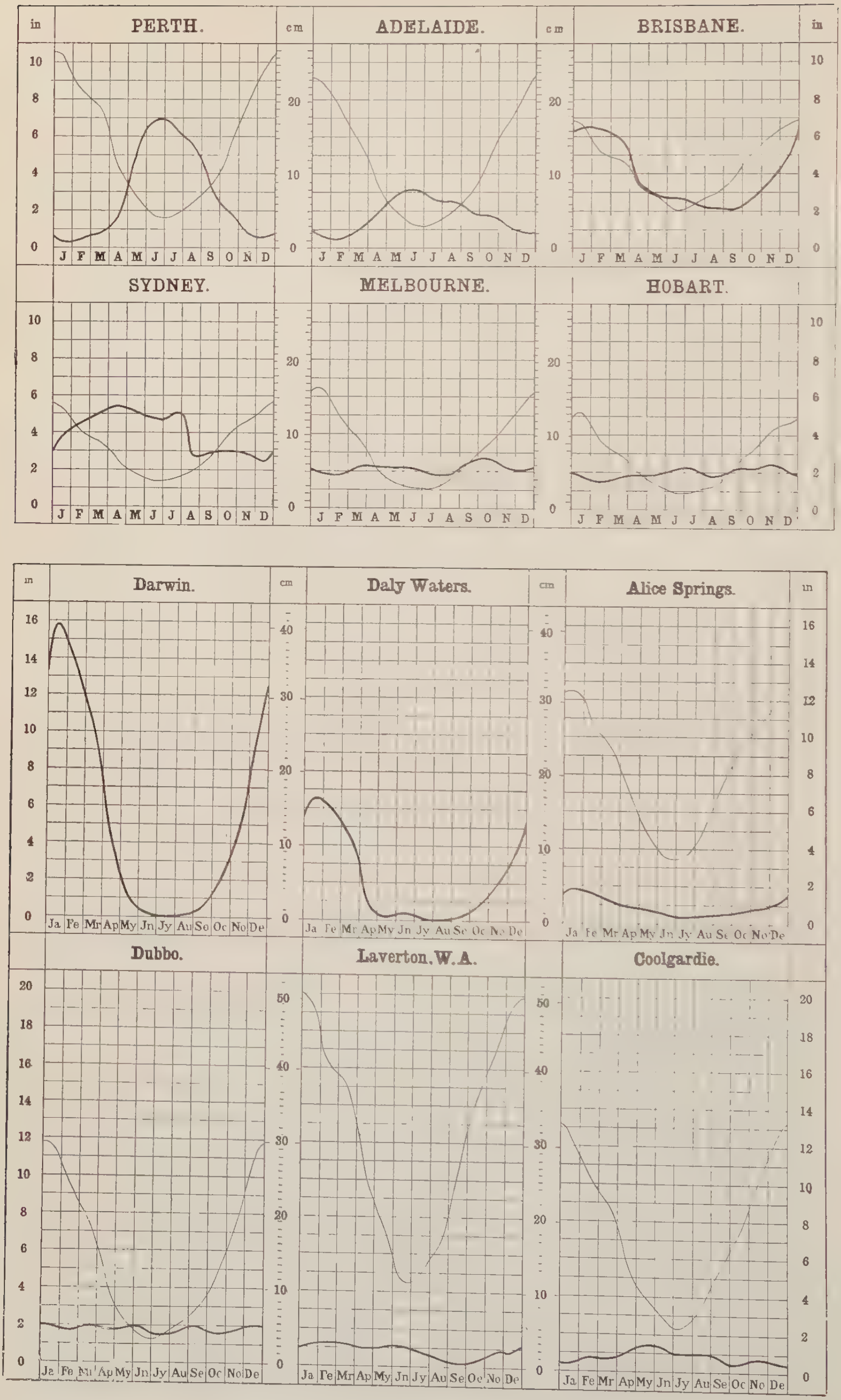
The upper and lower fine lines join the greatest and the least monthly means of relative humidity respectively, the figures under the outer columns " F " indicating percentage values.

The curves for temperature and vapour pressure joining the mean monthly values serve to show the annual fluctuation of these elements, but the relative humidity graphs joining the extreme values for each month do not indicate any normal annual variation.

Comparison of the maximum and minimum temperature curves affords a measure of the mean diurnal range of temperature. At Perth in the middle of January, for instance, there is normally a range of 21° from 63° F. to 84° F., but in June it is only 15° from 48° F. to 63° F.

The relative humidity curves illustrate the extreme range of the mean monthly humidity over a number of years.

MEAN MONTHLY RAINFALL AND EVAPORATION.



Explanation.—On the preceding graphs thick lines denote rainfall, and thin lines evaporation, and show the fluctuation of the mean rate of fall *per month* throughout the year. The results, plotted from the Climatological Tables herein are shown in inches (see the outer columns), and the corresponding metric scale (centimetres) is shown in the two inner columns. The evaporation is not given for Darwin and Daly Waters.

At Perth, Adelaide, Brisbane, Melbourne, Hobart, Alice Springs, and Coolgardie the results have been obtained from jacketed tanks sunk in the ground. At Sydney and Dubbo sunken tanks without water jackets are used, whilst at Laverton (W.A.) the records are taken from a small portable jacketed evaporation dish of 8 inches in diameter.

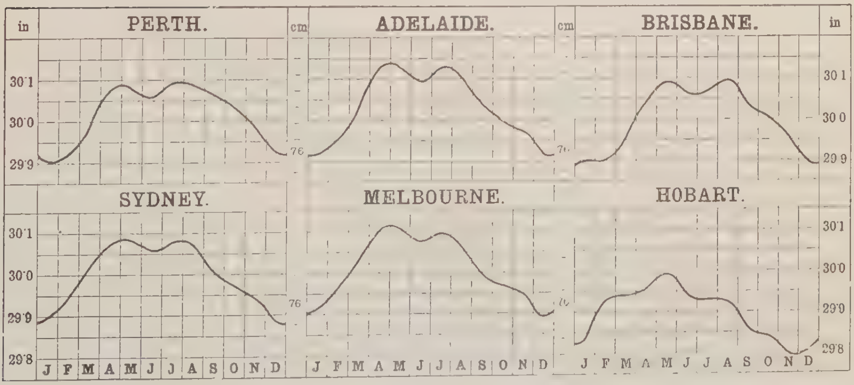
The distance for any date from the zero line to the curve represents the average number of inches, reckoned as per month, of rainfall at that date. Thus, taking the curves for Adelaide in the middle of January the rain falls on the average at the rate of about three-fourths of an inch per month, or, say, at the rate of about 9 inches per year. In the middle of June it falls at the rate of a little over 3 inches per month, or, say, at the rate of about 37 inches per year. At Dubbo, the evaporation is at the rate of nearly 11¾ inches per month about the middle of January, and only about 1½ inches at the middle of June.

The mean annual rainfall and evaporation at the places indicated are given in the appended table.

MEAN ANNUAL RAINFALL AND EVAPORATION.

Place.	Rainfall.	Evaporation.	Place.	Rainfall.	Evaporation.
	In.	In.		In.	In.
Perth ..	34.37	65.87	Darwin ..	61.67	—
Adelaide ..	21.18	54.59	Daly Waters ..	26.63	—
Brisbane ..	45.29	54.76	Alice Springs ..	11.10	94.24
Sydney ..	47.46	38.70	Dubbo ..	22.11	66.37
Melbourne ..	25.47	39.04	Laverton, W.A.	9.67	142.17
Hobart ..	23.79	32.12	Coolgardie .	10.06	84.41

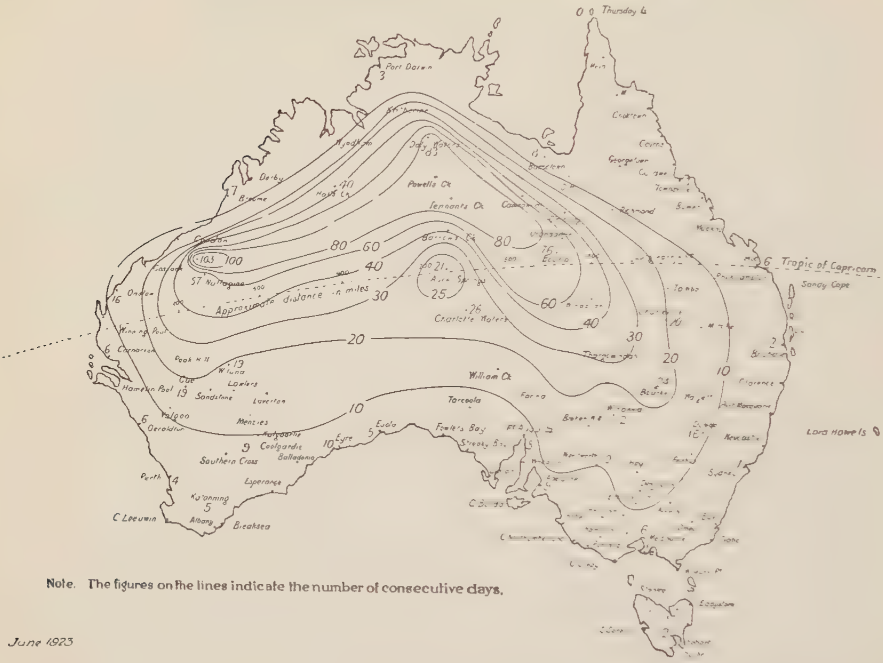
MEAN BAROMETRIC PRESSURE.—CAPITAL CITIES.



Explanation.—The lines representing the yearly fluctuations of barometric pressure at the State capital cities are means for long periods, and are plotted from the Climatological Tables herein. The pressures are shown in inches on about 2½ times the natural scale, and the corresponding pressures in centimetres are also shown in the two inner columns, in which each division represents one millimetre.

Interpretation.—Taking the Brisbane graph for purposes of illustration, it will be seen that the mean pressure in the middle of January is about 29.87 inches, and there are maxima in the middle of May and August of about 30.09 inches.

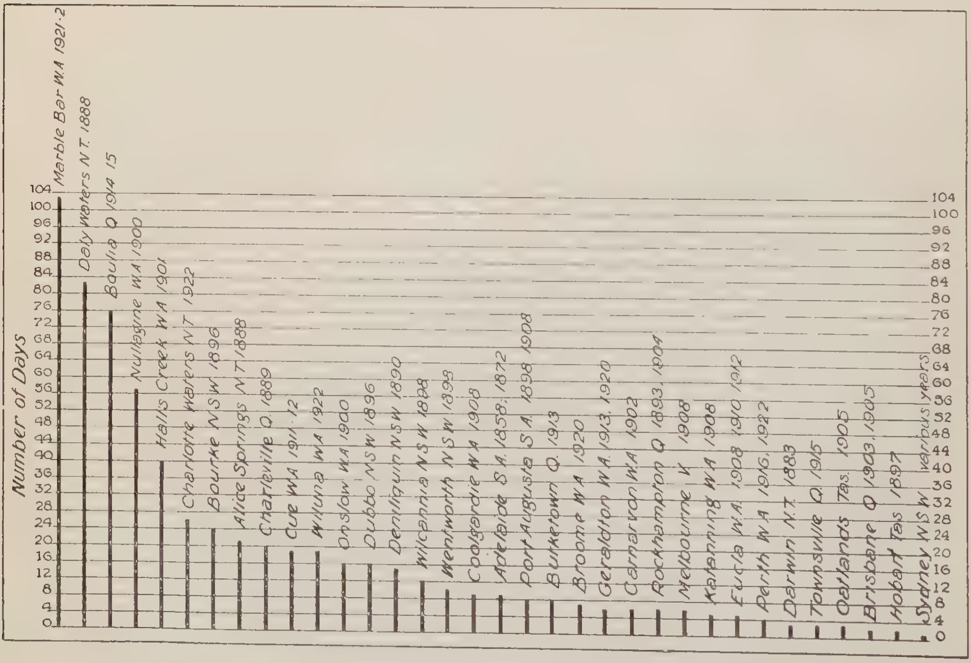
Area affected and period of duration of the Longest Heat Waves when the Maximum Temperature for consecutive 24 hours reached or exceeded 100° Fah.

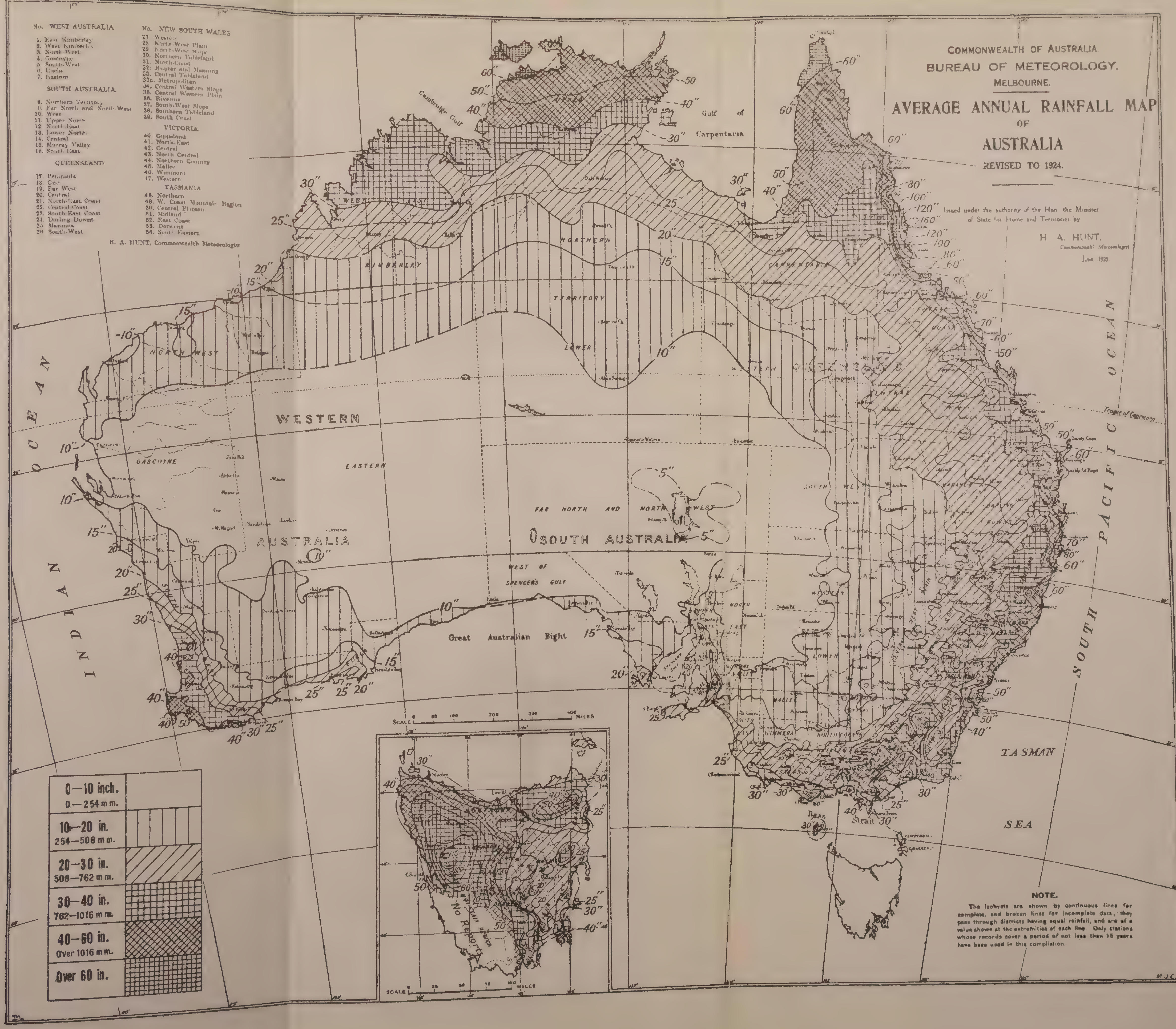


Note. The figures on the lines indicate the number of consecutive days.

June 1923

Greatest number of consecutive days on which the Shade Temperature was over 100° Fah. at the places indicated.





COMMONWEALTH OF AUSTRALIA.

BUREAU OF METEOROLOGY.

MELBOURNE.

AVERAGE ANNUAL RAINFALL MAP
OF
AUSTRALIA

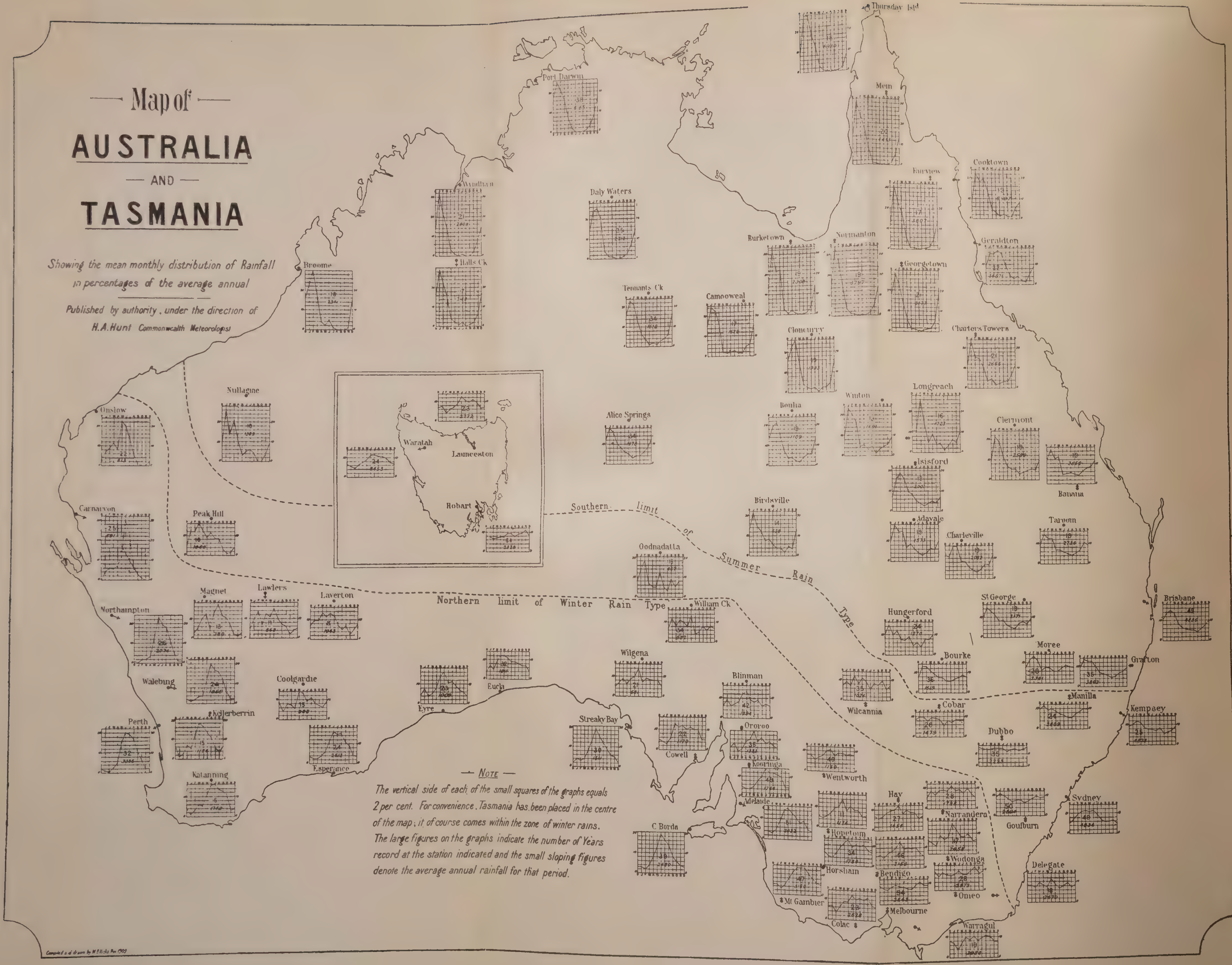
REVISED TO 1924.

Issued under the authority of the Hon. the Minister
of State for Home and Territories by

H. A. HUNT.
Commonwealth Meteorologist
June, 1925.

NOTE.

The Isohyets are shown by continuous lines for complete, and broken lines for incomplete data, they pass through districts having equal rainfall, and are of a value shown at the extremities of each line. Only stations whose records cover a period of not less than 15 years have been used in this compilation.



Map of AUSTRALIA AND TASMANIA

Showing the mean monthly distribution of Rainfall in percentages of the average annual

Published by authority, under the direction of H. A. Hunt Commonwealth Meteorologist

NOTE

The vertical side of each of the small squares of the graphs equals 2 per cent. For convenience, Tasmania has been placed in the centre of the map; it of course comes within the zone of winter rains. The large figures on the graphs indicate the number of Years record at the station indicated and the small sloping figures denote the average annual rainfall for that period.

Compiled and drawn by W. E. Hicks 1909

storms, like those from the north-east tropics, are very violent and destructive, and cause great havoc amongst the pearl-fishers. The greatest velocities are usually to be found in the south-eastern quadrant of the cyclones, with north-east to east winds. After leaving the north-west coast, these storms either travel southwards, following the coastline, or cross the continent to the Great Australian Bight. When they take the latter course, their track is marked by torrential rains, as much as 29.41 inches, for example, being recorded in 24 hours at Whim Creek from one such occurrence. Falls of 10 inches and over have frequently been recorded in the northern interior of Western Australia from similar storms.

Some further notes on severe cyclones and on "southerly bursters," a characteristic feature of the eastern part of Australia, will be found in previous issues of the Official Year Book (see No. 6, pp. 84, 85. 86).

A special article dealing with "Australian Hurricanes and Related Storms" appeared in Official Year Book No. 16, pp. 80–84.

15. Influences affecting Australian Climate.—(i) *General.* Australian history does not cover a sufficient period, nor is the country sufficiently occupied, to ascertain whether or not the advance of settlement has materially affected the climate as a whole. Local changes have, however, taken place, a fact which suggests that settlement and the treatment of the land have a distinct effect on local conditions. For example, the mean temperature of Sydney shows a rise of two-tenths of a degree during the last twenty years, a change probably brought about by the great increase of residential and manufacturing buildings within the city and in the surrounding suburbs. Again, low-lying lands on the north coast of New South Wales, which originally were seldom subject to frosts, have, with the denudation of the surrounding hills from forests, experienced annual visitations, the probable explanation being that through the absence of trees the cold air of the high lands now flows unchecked and untempered down the sides of the hills to the valleys and lower lands.

(ii) *Influence of Forests on Climate.* As already indicated, forests doubtless exercise a great influence on local climate, and hence, to the extent that forestal undertakings will allow, the weather can be controlled by human agency. The direct action of forests is an equalizing one ; thus, especially in equatorial regions, and during the warmest portion of the year, they considerably reduce the mean temperature of the air. They also reduce the diurnal extremes of shade temperatures by altering the extent of radiating surface by evaporation, and by checking the movement of air, and while decreasing evaporation from the ground, they increase the relative humidity. Vegetation greatly diminishes the rate of flow-off of rain and the washing away of surface soil, and when a region is protected by trees, a steadier water supply is ensured, and the rainfall is better conserved. In regions of snowfall, the supply of water to rivers is similarly regulated, and without this and the sheltering influence of ravines and "gullies," watercourses supplied mainly by melting snow would be subject to alternate periods of flooding and dryness. This is borne out in the case of the inland rivers ; the River Murray, for example, which has never been known to become dry, deriving its steadiness of flow mainly through the causes indicated.

(iii) *Direct Influence of Forests on Rainfall.* Whether forests have a direct influence on rainfall is a debatable question, some authorities alleging that precipitation is undoubtedly induced by forests, while others take the opposite view.

Sufficient evidence exists, however, to prove that, even if the rainfall has not increased, the beneficial climatic effect of forest lands more than warrants their protection and extension. Rapid rate of evaporation, induced by both hot and cold winds, injures crops and makes life uncomfortable on the plains, and, while it may be doubted that the forest aids in increasing precipitation, it must be admitted that it does check winds and the rapid evaporation due to them. Trees as wind-breaks have been successfully planted in central parts of the United States, and there is no reason why similar experiments should not be successful in many parts of the treeless interior of Australia. The belts should be planted at right angles to the direction of the prevailing parching winds, and if not more than half a mile apart will afford shelter to the enclosed areas.

In previous issues some notes on observations made in other countries were added (see Official Year Book No. 6, pp. 86 and 95).

16. Rainfall and Temperatures, Various Cities.—The following table shows rainfall and temperature for various important cities throughout the world, for the site of the Federal capital, and for the capitals of the Australian States.

RAINFALL AND TEMPERATURE—VARIOUS CITIES.

Place.	Height above M.S.L.	Annual Rainfall.			Temperature.					
		Average.	Highest.	Lowest.	(a)Mean Summer.	(b)Mean Winter.	Highest on Record.	Lowest on Record.	Average Hottest Month.	Average Coldest Month
	Ft.	Ins.	Ins.	Ins.	Fahr.	Fahr.	Fahr.	Fahr.	Fahr.	Fahr.
Amsterdam ..	6	27.29	40.59	17.60	63.2	36.8	90.0	4.1	64.4	35.4
Auckland ..	125	43.88	74.15	26.32	66.2	52.5	91.0	31.9	67.1	51.8
Athens	351	15.48	33.33	4.56	79.2	49.1	109.4	19.6	81.0	47.4
Bergen	72	77.09	111.58	44.49	56.8	34.2	88.5	4.8	57.9	33.6
Berlin	161	22.72	30.04	14.25	64.8	33.0	98.6	−13.0	66.0	31.8
Berne	1,877	36.30	58.23	24.69	62.2	30.1	91.4	− 3.6	64.4	28.0
Bombay ..	37	71.15	114.89	33.41	83.5	75.1	100.0	55.9	84.8	74.2
Breslau ..	482	22.52	32.56	16.50	64.1	33.5	100.0	−23.4	65.5	29.3
Brussels ..	328	28.35	41.18	17.73	62.6	36.0	95.5	− 4.4	63.7	34.5
Budapest ..	500	25.20	35.28	16.79	68.6	30.2	98.6	− 5.1	70.4	28.2
Buenos Ayres ..	82	38.78	79.72	20.04	72.7	50.9	103.1	22.3	73.8	50.0
Calcutta ..	21	61.82	98.48	38.43	85.6	68.0	108.2	44.2	86.0	66.4
Capetown ..	40	25.50	36.72	17.71	68.1	54.7	102.0	34.0	68.8	53.9
Caracas ..	3,420	30.03	47.36	23.70	68 3	65.3	87.8	48.2	69.2	63.7
Chicago ..	823	33.28	45.86	24.52	70.0	26.1	103.0	−23.0	72.4	23.7
Christchurch ..	25	25.16	35.30	13.54	61 3	43.3	95.7	21.3	61.6	42.4
Christiania (Oslo)..	75	23.23	32.21	16.26	61.0	24.5	95.0	−21.1	62.6	23.9
Colombo ..	40	83.83	139.70	51.60	81.5	79.9	95.8	65.0	82.6	79.1
Constantinople ..	245	28.75	42.74	14.78	74.0	43.5	103.6	13.0	75.7	42.0
Copenhagen ..	10	20.79	25.83	15.47	60.4	33.3	85.5	− 3.3	61.9	32.4
Dresden ..	115	26.80	34.49	17.72	62.9	32.4	93.4	−15.3	64.4	31.6
Dublin	47	27.66	35.56	16.60	59.4	42.0	87.2	13.3	60.5	41.7
Dunedin ..	300	36.96	54.51	22.15	56.3	42.6	94.0	23.0	57.0	41.5
Durban ..	260	40.79	71.27	27.24	75.6	64.4	110.6	41.1	76.7	63.8
Edinburgh ..	441	25.21	32.05	16.44	55.8	38.8	87.7	5.0	57.2	38.3
Geneva	1,328	33.48	46.89	21.14	64.4	33.7	..	..	66.2	32.2
Genoa	157	51.29	108.22	28.21	73.8	46.8	94.5	16.7	75.4	45.5
Glasgow ..	184	38.49	56.18	29.05	52.7	41.0	84.9	6.6	58.0	38.4
Greenwich ..	149	23.50	35.54	16.38	62.0	39.5	100.0	6.9	63.5	38.5
Hong Kong ..	109	84.28	119 72	45.84	86.2	64.8	97.0	32.0	86.7	62.9
Johannesburg ..	5,750	31.63	50.00	21.66	65.4	54.4	94.0	23.3	68.2	48.9
Leipzig	384	24.69	31.37	17.10	63.1	31.5	97.3	−14.8	64.8	30.6
Lisbon	312	29.18	52.79	17.32	69.6	51.3	94.1	32.5	70.2	49.3
London (Kew) ..	18	23.80	38.20	16.64	61.2	39.8	94.0	9.4	62.7	38.9
Madras	22	49.85	88.41	18.45	89.0	76.8	113.0	57.5	89.9	76.1
Madrid ..	2,149	16.23	27.48	9.13	73.0	41.2	107.1	10.5	75.7	39.7
Marseilles ..	246	22.24	43.03	12.28	70.5	45.3	100.4	11.7	72.3	44.6
Moscow ..	526	18.94	29.28	12.07	63.4	14.7	99.5	−44.5	66.1	11.9
Naples	489	34.00	56.58	21.75	73.6	48.0	99.1	23.9	75.4	46.8
New York ..	314	44.63	58.68	33.17	71.4	31.8	102.0	−13.0	73.5	30.2
Ottawa	236	33.40	53.79	25.63	67.2	14.1	98.0	−33.0	69.7	12.0
Paris	164	22.64	29.57	16.46	63.5	37.2	101.1	−14.1	64.9	36.1
Pekin	143	24.40	36.00	18.00	77.7	26.6	114.0	− 5.0	79.2	23.6
Petrograd ..	16	21.30	29.52	13.75	61.1	17.4	97.0	−38.2	63.7	15.2
Quebec	296	40.50	53.79	32.12	63.5	12.4	96.0	−34.0	66.3	10.1
Rome	166	32.57	57.89	12.72	74.3	46.0	104.2	17.2	76.1	44.6
San Francisco ..	155	22.27	38.82	9.00	58.8	50.5	101.0	29.0	59.3	48.5
Shanghai ..	21	45.00	62.52	27.92	78.0	41.1	102.9	10.2	80.4	37.8
Singapore ..	8	91.99	158.68	32.71	81.2	78.6	94.2	63.4	81.5	78.3
Stockholm ..	144	19.09	28.27	11.81	59.5	27.3	96.8	−25.6	61.9	26.4
Tokio	65	61.45	86.37	45.72	74.8	39.2	97.9	17.2	77.7	37.5
Trieste	85	42.94	63.14	26.57	73 9	41.3	99.5	14.0	76.3	39.9
Vienna	663	24.50	33.90	16.50	65.7	30.4	97.7	− 8.0	67.1	28.0
Vladivostock ..	55	19.54	33.60	9.39	63.9	11.0	95.7	−21 8	69.4	6.1
Washington ..	112	43.50	61.33	30.85	74.7	34.5	106.0	−15.0	76.8	32.9
Wellington (N Z.)	10	48 65	67.68	27.83	61.8	48.6	88.0	28.6	62.5	47.7
Zürich	1,542	45.15	78.27	29.02	63.3	31.3	94.1	− 0.8	65.1	29.5
FEDERAL CAPITAL SITE.										
Canberra (Dist.) Queanbeyan	2,000 to 2,900	22.59	41.29	10.45	(a) 67.7	(b) 44.0	102.6	14.0	68.5	42.7
STATE CAPITALS.										
Perth	197	34.37	49.22	20.21	(a) 72.9	(b) 56.0	108.4	34.2	74.1	55.2
Adelaide ..	140	21.18	30.87	11.39	73.0	53.1	116.3	32.0	74.0	51.8
Brisbane ..	137	45.30	88.26	16.17	76.7	59.7	108.9	36.1	77.2	58.5
Sydney	138	47.82	82.76	21.49	71.0	54.1	108.5	35.9	71.6	52.7
Melbourne ..	115	26.04	44.25	15.61	66.6	50.0	111.2	27.0	67.6	48.7
Hobart	177	23.79	43.39	13.43	61.5	46.9	105.2	27.0	62.3	45.7

(a) Mean of the three hottest months. (b) Mean of the three coldest months.

17. Climatological Tables.—The means, averages, extremes, totals, etc., for a number of climatological elements have been determined from long series of observations at the Australian capitals up to and including the year 1927. These are given in the following tables :—

CLIMATOLOGICAL DATA—PERTH, WESTERN AUSTRALIA.

LAT. 31° 57′ S., LONG. 115° 50′ E. HEIGHT ABOVE M.S.L. 197 FT.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS, AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Mn. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind.						Mean Amount of Evaporation (inches).	No. of Days Lightning.	Mean Amount of Clouds, 9 a.m., 3 p.m. & 9 p.m.	No. of Clear Days.
		Greatest Number of Miles in One Day.		Mean Hourly Pressure. (lbs.)	Total Miles.	Prevailing Direction.					
						9 a.m.	3 p.m.				
No. of yrs. over which observation extends	43	30		29	30	30		29	30	30	30
January	29.966	797	27/98	0.68	11,198	E S E	S S W	10.39	1.5	2.8	14
February	29.924	650	6/08	0.63	9,742	E S E	S S W	8.54	1.5	3 0	12
March	29.986	651	6/13	0.52	9,934	E	W S W	7.56	1.4	3.3	12
April	30.074	955	25/00	0.40	8,325	E N E	S S W	4.74	1.5	4.3	8
May	30.072	768	5/12	0.36	8,104	N E	W S W	2.74	2.2	5.3	5
June	30.058	914	19/27	0.36	7,909	N N E	W	1.75	2.2	5.9	3
July	30.091	1015	20/26	0.40	8,617	N N E	W	1.75	2.2	5.5	5
August	30.087	966	15/03	0.41	8,751	N N E	W S W	2.37	1.5	5 3	5
September ..	30.062	864	11/05	0.46	8,916	N E	W S W	3.33	1.4	4.9	6
October	30.029	809	6/16	0.53	9,886	S S E	S W	5.23	1.1	5 0	6
November .. .	29.990	777	18/97	0.58	10,037	S E	S W	7.63	1.4	3.8	8
December ..	29.927	776	6/22	0.64	10,901	S E	S S W	9.84	1.8	3.0	12
Year { Totals ..	—	—		—	—	—		65.87	19.7	—	96
Year { Averages ..	30.017	—		0.49	9,360	E	S W	—	—	4.3	—
Year { Extremes ..	—	1015	20/7/26	—	—	—		—	—	—	—

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (Fahr.).			Extreme Shade Temperature (Fahr.).				Extreme Range.	Extreme Temperature (Fahr.).				Mean Hours of Sunshine.
	Mean Max.	Mean Min.	Mean	Highest.		Lowest.			Highest in Sun.		Lowest on Grass.		
No. of yrs. over which observation extends	31	31	31	31		31		—	29		29		30
January	84.4	63.1	73.8	108.4	28/21	48.6	20/25	59.8	177.3	22/14	39.5	20/25	319.9
February	84.7	63.5	74.1	107.4	7/23	47.7	1/02	59.7	169.0	4/99	39.8	1/13	273.8
March	81.3	61.0	71.2	106.4	14/22	45.8	8/03	60.6	167.0	19/18	36.7	8/03	262 8
April	76.3	57.3	66.8	99.7	9/10	39.3	20/14	60.4	157.0	8/16	31.0	20/14	217 2
May	68.8	52.6	60.7	90.4	2/07	34.3	11/14	56.1	146.0	4/25	25.3	11/14	176.3
June	64.1	49 5	56.8	81.7	2/14	35.0	30/20	46.7	135.5	9/14	26.5	30/20	142 9
July	62.7	47.8	55.2	76.4	21/21	34.2	7/16	42.2	133.2	13/15	25.1	30/20	164 8
August	63.8	48.1	56.0	81.0	12/14	35.3	31/08	45.7	145.1	29/21	27.9	10/11	185.9
September ..	66.3	50.2	58.2	90.9	30/18	38.0	17/13	52.0	153.6	29/16	29.2	21/16	204.6
October	68.9	52.6	60 8	95.3	30/22	40.5	5/24	54.8	154.0	29/14	30.5	4/17	234 4
November	75.4	56.8	66 1	104.6	24/13	42.0	1/04	62.6	167.0	30/25	35.4	6/10	285.9
December ..	81.0	60.7	70.8	107.9	20/04	48.0	2/10	59.9	168.8	11/27	39.0	(c)	322.5
Year { Averages ..	73.1	55.3	64.2	—		—		—	—		—		2791.0
Year { Extremes ..	—	—	—	108.4	28/1/21	34.2	7/7/16	74.2	177.3	22/1/14	25.1	30/7/20	—

HUMIDITY, RAINFALL, AND DEW.

Month.	Vapour Pressure (inches).	Rel. Hum. (%)			Rainfall (inches).								Dew.
	Mean 9 a.m.	Mean 9 a.m.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days Rain.	Greatest Monthly.		Least Monthly.		Greatest in One Day.		Mean No. Days Dew.
No. of yrs. over which observation extends	31	31	31	31	52	52	52		52		52		31
January	0.440	51	61	42	0.34	3	2.17	1879	0.00	(a)	1.74	28/79	2.3
February	0.451	53	65	46	0.45	3	2.98	1915	0.00	(a)	1.63	26/15	3.3
March	0.430	57	66	46	0.81	5	4.50	1896	0.00	(a)	2.06	26/23	5.5
April	0.399	62	72	51	1.65	7	5.85	1926	0.00	1920	2.62	30/04	9 2
May	0.368	72	81	61	4.97	14	12.13	1879	0.98	1903	2.80	20/79	12.5
June	0.341	78	83	68	6.94	17	12.80	1923	2.16	1877	3.90	10/20	12.3
July	0.319	77	84	69	6.56	17	12.28	1926	2.42	1876	3.00	4/91	13.1
August	0.319	73	79	63	5.65	18	10.33	1882	0.46	1902	2.79	7/03	11.6
September ..	0.344	68	76	58	3.42	15	7.84	1923	0.34	1916	1.73	23/09	10 0
October	0.353	61	75	54	2.22	12	7.87	1890	0.49	1892	1 38	15/10	5.4
November	0.385	54	63	46	0.80	6	2.78	1916	0.00	1891	1.11	30/03	3.7
December ..	0.413	51	62	44	0.56	4	3.05	1888	0.00	1896	1.72	1/88	2.8
Year { Totals ..	—	—	—	—	34.37	121	—		—		—		91.7
Year { Averages ..	0.377	62	—	—	—	—	—		—		—		—
Year { Extremes ..	—	—	84	42	—	—	12.80	1923	Nil	(b)	3.90	10/6/20	—

(a) Various years. (b) Jan., Feb., March, April, Nov., Dec., various years. (c) 3/1910 and 12/1920.

CLIMATOLOGICAL DATA—ADELAIDE, SOUTH AUSTRALIA.

LAT. 34° 56′ S., LONG. 138° 35′ E. HEIGHT ABOVE M.S.L. 140 FT.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS, AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Mn. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind. Greatest Number of Miles in One Day.	Wind. Mean Hourly Pressure. (lbs.)	Wind. Total Miles.	Wind. Prevailing Direction. 9 a.m.	Wind. Prevailing Direction. 3 p.m.	Mean Amount of Evaporation (inches).	No. of Days Lightning.	Mean Amount of Clouds, 9 a.m., 3 p.m. & 9 p.m.	No. of Clear Days.
No. of yrs. over which observation extends	71	50	50	50	50		58	56	60	46
January	29.916	758 19/99	0.34	7,880	S W	S W	8.97	2.3	3.5	8.4
February	29.951	691 22/96	0.29	6,682	N E	S W	7.31	2.0	3.5	7.1
March	30.038	628 9/12	0.24	6,646	S E	S W	5.83	2.1	3.9	7.1
April	30.121	773 10/96	0.22	6,087	N E	S W	3.46	1.5	5.0	4.3
May	30.120	760 9/80	0.21	6,276	N E	W S W	2.02	1.7	5.8	2.1
June	30.097	750 12/78	0.25	6,521	N E	N W	1.23	2.0	6.1	1.7
July	30.126	674 25/82	0.24	6,713	N E	N W	1.28	1.6	5.8	1.8
August	30.098	773 31/97	0.28	7,145	N E	W S W	1.87	2.2	5.6	2.6
September ..	30.041	720 2/87	0.31	7,258	N N E	S W	2.85	2.4	5.2	3.3
October	30.995	768 28/98	0.34	7,861	N N E	S W	4.77	3.4	5.0	4.1
November	30.977	677 2/04	0.33	7,512	S W	S W	6.58	3.5	4.6	5.4
December ..	30.919	675 12/91	0.34	7,914	S W	S W	8.42	2.7	3.8	7.4
Year Totals ..	—	—	—	—	—		54.59	27.4	—	55.3
Year Averages ..	30.033	—	0.28	7,041	N E	S W	—	—	4.8	—
Year Extremes ..	—	773 (a)	—	—	—		—	—	—	—

(a) 10/4/96 and 31/8/97.

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (Fahr.). Mean Max.	Mean Temperature (Fahr.). Mean Min.	Mean Temperature (Fahr.). Mean	Extreme Shade Temperature (Fahr.). Highest.	Extreme Shade Temperature (Fahr.). Lowest.	Extreme Range.	Extreme Temperature (Fahr.). Highest in Sun.	Extreme Temperature (Fahr.). Lowest on Grass.	Mean Hours of Sunshine.
No. of yrs. over which observation extends	71	71	71	71	71	71	50	67	46
January	86.2	61.5	73.9	116.3 26/58	45.1 21/84	71.2	180.0 18/82	36.5 14/79	310.6
February	86.1	62.0	74.0	113.6 12/99	45.5 23/18	68.1	170.5 10/00	35.8 23/26	262.2
March	80.7	58.8	69.8	108.0 12/61	44.8 –/57	63.2	174.0 17/83	33.8 27/80	240.4
April	73.3	54.6	63.9	98.0 10/66	39.6 15/59	58.4	155.0 1/83	30.2 16/17	179.4
May	65.6	50.2	57.9	89.5 4/21	36.9 (a)	52.6	148.2 12/79	25.9 10/91	147.9
June	60.3	46.7	53.5	76.0 23/65	32.5 27/76	43.5	138.8 18/79	22.9 12/13	122.2
July	58.9	44.6	51.8	74.0 11/06	32.0 24/08	42.0	134.5 26/90	23.3 25/11	137.9
August	62.0	45.9	53.9	85.0 31/11	32.3 17/59	52.7	140.0 31/92	23.5 7/88	164.0
September ..	66.3	47.9	57.1	90.7 23/82	32.7 4/58	58.0	160.5 23/82	25.0 25/27	183.9
October	72.5	51.4	62.0	102.9 21/22	36.0 –/57	66.9	162.0 30/21	27.8 2/18	228.1
November	78.7	55.4	67.0	113.5 21/65	40.8 2/09	72.7	166.9 20/78	31.5 2/09	264.0
December ..	83.3	58.9	71.1	114.2 14/76	43.0 (b)	71.2	175.7 7/99	32.5 4/84	302.6
Year Averages ..	72.8	53.2	63.0	—	—	—	—	—	2543.2
Year Extremes ..	—	—	—	116.3 26/1/58	32.0 24/7/08	84.3	180.0 18/1/82	22.9 12/6/1913	—

(a) 26/1895 and 24/1904. (b) 16/1861 and 4/1906.

HUMIDITY, RAINFALL, AND DEW.

Month.	Vapour Pressure (inches). Mean 9 a.m.	Rel. Hum. (%) Mean 9 a.m.	Rel. Hum. (%) Highest Mean.	Rel. Hum. (%) Lowest Mean.	Rainfall (inches). Mean Monthly.	Rainfall (inches). Mean No. of Days Rain.	Rainfall (inches). Greatest Monthly.	Rainfall (inches). Least Monthly.	Rainfall (inches). Greatest in One Day.	Dew. Mean No. Days Dew.
No. of yrs. over which observation extends	60	60	60	60	89	89	89	89	89	56
January	0.342	39	59	30	0.72	4	4.00 1850	Nil (a)	2.30 2/89	4.0
February	0.357	41	56	30	0.72	4	6.09 1925	Nil (b)	5.57 7/25	5.7
March	0.345	46	58	36	1.03	6	4.60 1878	Nil (c)	3.50 5/78	10.9
April	0.336	56	72	37	1.73	9	6.78 1853	0.03 1923	3.15 5/60	13.9
May	0.317	67	76	49	2.78	14	7.75 1875	0.20 1891	2.75 1/53	15.7
June	0.298	76	84	67	3.10	16	8.58 1916	0.42 1886	2.11 1/20	15.8
July	0.276	76	87	68	2.64	16	5.38 1865	0.37 1899	1.75 10/65	17.1
August	0.287	70	77	54	2.53	16	6.24 1852	0.35 1914	2.23 19/51	16.5
September ..	0.297	61	72	44	2.05	14	5.83 1923	0.45 1896	1.59 20/23	15.5
October	0.300	51	67	29	1.73	11	3.83 1870	0.17 1914	2.24 16/08	12.7
November	0.310	43	57	31	1.15	7	3.55 1851	0.04 1885	1.88 28/58	6.9
December ..	0.323	39	50	33	1.00	6	3.98 1861	Nil 1904	2.42 23/13	4.7
Year Totals ..	—	—	—	—	21.18	123	—	—	—	139.4
Year Averages ..	0.311	53	—	—	—	—	—	—	—	—
Year Extremes ..	—	—	87	29	—	—	8.58 6/16	Nil (d)	5.57 7/2/25	—

(a) 1848, etc. (b) 1848, etc. (c) 1859, etc. (d) January, February, March, December, various years.

CLIMATOLOGICAL DATA—BRISBANE, QUEENSLAND.

LAT. 27° 28′ S., LONG. 153° 2′ E. HEIGHT ABOVE M.S.L. 137 FT.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS, AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Mn. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind.					Mean Amount of Evaporation (inches).	No. of Days Lightning.	Mean Amount of Clouds, 9 a.m., 3 p.m. & 9 p.m.	No. of Clear Days.
		Greatest Number of Miles in One Day.		Mean Hourly Pressure. (lbs.)	Total Miles.	Prevailing Direction. 9 a.m. 3 p.m.				
No. of yrs. over which observation extends	41	14		17	17	41	19	41	36	9
January	29.869	361	1/22	0.12	4,775	E	6.694	6.4	5.7	3.3
February	29.903	347	5/22	0.14	4,621	S E	5.524	5.4	5.7	2.2
March	29 958	348	10/25	0.11	4,467	S E	4.970	4.5	5.3	5.4
April	30.048	400	3/25	0.10	4,089	S & S E	3.897	3.3	4.5	8 0
May	30.080	363	7/25	0.08	3.854	S	3.020	3.3	4.3	9.2
June	30.069	400	12/24	0.09	3,922	S W	2.321	2.3	4.2	8.9
July	30.071	359	2/23	0.08	3.946	S W	2.586	2.6	3.7	11.2
August	30.095	331	6/23	0.09	4,166	S W	3.281	3.8	3.5	12.5
September ..	30.042	322	14/23	0.09	3 978	N E & S	4.123	5.9	3.5	12.6
October	30.004	325	25/18	0.10	4 319	N E	5.493	6.8	4.0	8.9
November ..	29.959	331	31/27	0.12	4,636	N E	6.148	8.7	4.7	6.4
December ..	29.889	467	15/26	0.13	4,987	N E	6.703	9.1	5.3	3.4
Year Totals ..	—	—		—	—	—	54.760	62.1	—	92.0
Year Averages ..	29.999	—		0.10	4 313	S & E	—	—	4.5	—
Year Extremes ..	—	467	15/12/26	—	—	—	—	—	—	—

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (Fahr.).			Extreme Shade Temperature (Fahr.).				Extreme Range.	Extreme Temperature (Fahr.).				Mean Hours of Sunshine.
	Mean Max.	Mean Min.	Mean.	Highest.		Lowest.			Highest in Sun.		Lowest on Grass.		
No. of yrs. over which observation extends	41	41	41	41		41		41	41		41		19
January	85.4	68.9	77.2	108.9	14/02	58.8	4/93	50.1	166.4	10/17	49.9	4/93	220.0
February	84.6	68.4	76.5	105.7	21/25	58.7	(a)	47.0	165.2	6/10	49.3	9/89	208.1
March	82.3	66.3	74.3	99.4	5/19	52.4	29/13	47.0	161.7	4/25	45.4	29/13	205.4
April	79.0	61.6	70.3	95.2	(b)	44.4	25/25	50.8	153.8	11/16	36.7	24/25	208.7
May	73.7	55.4	64.6	90.3	21/23	41.3	24/99	49.0	147.0	1/10	29.8	8/97	201.1
June	69.4	51.1	60.2	88.9	19/18	36.3	29/08	52.6	136.0	3/18	25.4	23/88	175.5
July	68.5	48.5	58.5	83.4	28/98	36.1	(c)	47.3	146.1	20/15	23.9	11/90	205.8
August	71.1	49.8	60.4	87.5	28/07	37.4	6/87	50.1	141.9	20/17	27.1	9/99	232.2
September ..	75.7	54.8	65.2	95.2	16/12	40.7	1/96	54.5	155.5	26/03	30.4	1/89	235.5
October	79.7	59.9	69.8	101.4	18/93	43.3	3/99	58.1	157.4	31/18	34.9	8/89	255.7
November ..	82.8	64.2	73.5	106.1	18/13	48.5	2/05	57.6	162.3	7/89	38.8	1/05	244.5
December ..	85.2	67.5	76.4	105.9	26/93	56.4	13/12	49.5	161.7	27/26	49.1	3/94	238.1
Year Averages ..	78.1	59.7	68.9	—		—		—	—		—		2630.6
Year Extremes ..	—	—	—	108.9	14/1/02	36.1	(d)	72.8	166.4	10/1/17	23.9	11/7/90	—

(a) 10 and 11/04. (b) 9/96 and 5/03. (c) 12/94 and 2/96. (d) 12/7/94 and 2/7/96.

HUMIDITY, RAINFALL, AND DEW.

Month.	Vapour Pressure (inches).	Rel. Hum. (%)			Rainfall (inches).								Dew.
	Mean 9 a.m.	Mean 9 a.m.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days Rain.	Greatest Monthly.		Least Monthly.		Greatest in One Day.		Mean No. Days Dew.
No. of yrs. over which observation extends	41	41	41	41	76	68	76		76		76		41
January	0.638	66	79	53	6.50	14	27.72	1895	0.32	1919	18.31	21/87	7.3
February	0.646	69	82	55	6.18	13	40.39	1893	0.58	1849	8.36	16/93	7.5
March	0.615	72	85	56	5.78	15	34.04	1870	nil	1849	11.18	14/08	10.5
April	0.525	72	80	60	3.54	12	15.28	1867	0.04	1897	4.47	13/16	13.2
May	0.426	73	85	61	2.81	10	13.85	1876	nil	1846	5.62	9/79	14.2
June	0.360	74	84	67	2.77	8	14.03	1873	nil	1847	6.01	9/93	12.3
July	0.330	73	81	61	2.28	8	8.46	1889	nil	1841	3.54	16/89	13.7
August	0.350	64	80	56	2.08	7	14.67	1879	nil	(a)	4.89	12/87	12.1
September ..	0.413	65	76	47	2.05	8	5.43	1886	0.10	1907	2.46	2/94	11.6
October	0.476	60	72	48	2.58	9	9.99	1882	0.14	1900	3.75	3/27	10.5
November ..	0.553	60	72	45	3.75	10	12.41	1917	nil	1842	4.46	16/86	6.9
December ..	0.602	62	69	52	4.97	12	13.99	1910	0.35	1865	6.60	28/71	6.4
Year Totals ..	—	—	—	—	45.29	126	—		—		—		126.2
Year Averages ..	0.495	68	—	—	—	—	—		—		—		—
Year Extremes ..	—	—	85	45	—	—	40.39	2/93	nil	(b)	18.31	21/1/87	—

(a) 1862, 1869, 1880. (b) March, May, June, July, August and November, various years.

CLIMATOLOGICAL DATA—SYDNEY, NEW SOUTH WALES.

LAT. 33° 52′ S., LONG. 151° 12′ E. HEIGHT ABOVE M.S.L., 138 FT.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS, AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Mn. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind. Greatest Number of Miles in One Day.	Wind. Mean Hourly Pressure. (lbs.)	Wind. Total Miles.	Wind. Prevailing Direction. 9 a.m., 3 p.m.	Mean Amount of Evaporation (Inches).	No. of Days Lightning.	Mean Amount of Clouds, 9 a.m., 3 p.m., & 9 p.m.	No. of Clear Days.
No. of yrs. over which observation extends	69	61	61	61	·61	48	68	66	64
January	29.898	721 1/71	0.35	7,995	N E	5.289	4.8	5.8	2.5
February	29.943	871 12/69	0.31	6,859	N E	4.190	4.2	5.9	1.9
March	30.012	943 20/70	0.24	6,670	N E	3.591	4.1	5.5	2.5
April	30.073	803 6/82	0.21	6,043	N E	2.555	3 8	5.0	3.4
May	30.077	758 6/98	0.21	6.262	W	1.801	3.2	4.8	3.9
June	30.061	712 7/00	0.27	6,736	W	1.420	2.1	4.8	4.4
July	30.071	930 17/79	0.27	6,969	W	1.526	2.3	4.4	5.4
August	30.069	756 22/72	0.24	6,736	W	1.909	3.1	4.0	5.7
September ..	30.008	964 6/74	0.28	6,980	W	2.661	4.0	4.3	4.7
October	29.968	926 4/72	0.32	7,618	N E	3.857	4.9	4.9	3.3
November.. ..	29.940	720 13/68	0.32	7,456	N E	4.569	5.4	5.5	2.4
December ..	29.883	938 3/84	0.34	7,872	N E	5.331	5.6	5.6	2.5
Year { Totals ..	—	—	—	—	—	38.699	47.5	—	42.6
Year { Averages ..	30.000	—	0.28	7,016	N E	—	—	5.0	—
Year { Extremes ..	—	964 6/9/74	—	—	—	—	—	—	—

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (Fahr.). Mean Max.	Mean Temperature (Fahr.). Mean Min.	Mean Temperature (Fahr.). Mean	Extreme Shade Temperature (Fahr.). Highest.	Extreme Shade Temperature (Fahr.). Lowest.	Extreme Range.	Extreme Temperature (Fahr.). Highest in Sun.	Extreme Temperature (Fahr.). Lowest on Grass.	Mean Hours of Sunshine.
No. of yrs. over which observation extends	69	69	69	69	69	69	66	69	17
January	78.4	64.8	71.6	108.5 13/96	51.2 14/65	57.3	164.3	43.7	208.6
February	77.7	64.9	71.3	107.8 8/26	49.3 28/63	58.5	161.2	43.4	188.1
March	75.7	62.9	69.3	102.6 3/69	48.8 14/86	53.8	158.3	39.9	189.9
April	71.3	58.1	64.7	91.0 20/22	44.6 27/64	46.4	144.1	33.3	155.2
May	65.4	52.2	58.8	86.0 1/19	40.2 22/59	45.8	129.7	29.3	144.6
June	61.0	48.3	54.7	79.8 2/23	38.0 5/20	41.8	125.5	28.1	130.7
July	59.6	45.9	52.7	78.3 22/26	35.9 12/90	42.4	124.7	24.0	151.7
August	62.6	47.5	55.0	82.0 31/84	36.8 3/72	45.2	149.0	26.1	191.7
September ..	66.9	51.4	59.2	92.3 27/19	40.8 18/64	51.5	142.2	30.1	194.0
October	71.3	55.8	63.6	99.7 19/98	42.2 6/27	57.5	151.9	32.7	214.5
November.. ..	74.5	59.6	67.0	102.7 21/78	45.8 1/05	56.9	158.5	36.0	205.5
December ..	77.2	62.0	70.1	107.5 31/04	48.4 3/24	59.1	164.5	41.4	204.2
Year { Averages ..	70.1	56.2	63.1	—	—	—	—	—	2128.7
Year { Extremes ..	—	—	—	108.5 13/1/96	35.9 12/7/90	72.6	164.5	24.0	—

HUMIDITY, RAINFALL, AND DEW.

Month.	Vapour Pressure (inches.) Mean 9 a.m.	Rel. Hum. (%) Mean 9 a.m.	Rel. Hum. (%) Highest Mean.	Rel. Hum. (%) Lowest Mean.	Rainfall (inches). Mean Monthly.	Rainfall (inches). Mean No. of Days Rain.	Rainfall (inches). Greatest Monthly.	Rainfall (inches). Least Monthly.	Rainfall (inches). Greatest in One Day.	Dew. Mean No. Days Dew.
No. of yrs. over which observation extends	69	69	69	69	69	69	69	69	69	69
January	0.546	67	78	58	3.65	14	15.26 1911	0.42 1888	7.08 13/11	1.2
February	0.560	71	81	59	4.20	14	18 56 1873	0.34 1902	8.90 25/73	2.3
March	0.527	73	85	62	4.98	15	18.70 1870	0.42 1876	6.52 9/13	3 8
April	0.444	76	87	63	5 52	14	24.49 1861	0.06 1868	7.52 29/60	6.1
May	0.357	71	90	63	5 18	15	23.03 1919	0.18 1860	8.36 28/89	6.7
June	0.299	77	89	68	4.74	13	16.30 1885	0.19 1904	5.17 16/84	5.9
July	0.275	76	88	65	4.80	12	13.21 1900	0.12 1862	5.72 28/08	6.1
August	0.290	72	84	56	2 97	11	14.89 1899	0.04 1885	5.33 2/60	5 6
September ..	0.331	66	79	49	2.86	12	14.05 1879	0.08 1882	5.69 10/79	4.0
October	0.383	63	77	46	2.85	12	11.14 1916	0.21 1867	6.37 13/02	3.0
November.. ..	0.444	63	79	42	2.85	12	9.89 1865	0.07 1915	4.23 19/00	2.5
December ..	0.503	64	77	52	2.86	13	15.82 1920	0.23 1913	4.75 13/10	1.6
Year { Totals ..	—	—	—	—	47.46	157	—	—	—	48.8
Year { Averages ..	0.401	70	—	—	—	—	—	—	—	—
Year { Extremes ..	—	—	90	42	—	—	24.49 4/1861	0.04 8/1885	8.90 25/2/1873	—

CLIMATOLOGICAL DATA—MELBOURNE, VICTORIA.

LAT. 37° 49′ S., LONG. 144° 58′ E. HEIGHT ABOVE M.S.L., 115 FT.

BAROMETER, WIND, EVAPORATION, LIGHTNING, CLOUDS, AND CLEAR DAYS.

Month.	Bar. corrected to 32° F. Mn. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind. Greatest Number of Miles in One Day.		Wind. Mean Hourly Pressure. (lbs.)	Wind. Total Miles.	Wind. Prevailing Direction. 9 a.m.	Wind. Prevailing Direction. 3 p.m.	Mean Amount of Evaporation (inches).	No. of Days Lightning.	Mean Amount of Clouds, 9 a.m. & 3 p.m.	No. of Clear Days.
No. of yrs. over which observation extends.	70	54		54	54	54		55	20	70	20
January	29.911	583	10/97	0.27	7,159	S W	S E	6.425	1.9	5.0	7.4
February	29.959	566	8/68	0.25	6,209	S W	S E	5.074	2.5	5.0	7.0
March	30.033	677	9/81	0.20	6,179	S W	S E	3.998	1.5	5.5	5.1
April	30.105	597	7/68	0.19	5,595	S W	N W	2.392	0.8	5.8	4.7
May	30.101	693	12/65	0.19	5,756	N W	N E	1.475	0.6	6.5	3.1
June	30.076	761	13/76	0.22	6,163	N W	N E	1.090	0.6	6.7	2.3
July	30.090	755	8/74	0.21	6,227	N W	N E	1.059	0.5	6.4	3.0
August	30.064	637	14/75	0.24	6.699	N W	N E	1.475	1.1	6.3	2.9
September ..	29.997	617	11/72	0.26	6,799	N W	S W	2.301	1.5	6.1	3.6
October	29.965	899	5/66	0.27	7,121	S W	N W	3.364	2.2	5.9	3.7
November.. ..	29.951	734	13/66	0.27	6,853	S W	S E	4.580	2.4	5.9	3.6
December.. ..	29.898	655	1/75	0.27	7,299	S W	S E	5.808	1.7	5.5	4.3
Year Totals ..	—	—		—	—	—		39.041	17.3	—	50.7
Year Averages ..	30.012	—		0.24	6,505	S W	NW	—	—	5.9	—
Year Extremes ..	—	899	5/10/66	—	—	—		—	—	—	—

TEMPERATURE AND SUNSHINE.

Month.	Mean Temperature (Fahr.). Mean Max.	Mean Temperature (Fahr.). Mean Min.	Mean Temperature (Fahr.). Mean	Extreme Shade Temperature (Fahr.). Highest.		Extreme Shade Temperature (Fahr.). Lowest.		Extreme Range.	Extreme Temperature (Fahr.). Highest in Sun.		Extreme Temperature (Fahr.). Lowest on Grass.		Mean Hours of Sunshine.
No. of yrs. over which observation extends	72	72	72	72		72		72	68		68		46
January	78.1	56.8	67.4	111.2	14/62	42.0	28/85	69.2	178.5	14/62	30.2	28/65	265.4
February	78.0	57.1	67.6	109.5	7/01	40.2	24/24	69.3	167.5	15/70	30.9	6/91	242.8
March	74.3	54.6	64.5	105.5	2/93	37.1	17/84	68.4	164.5	1/68	28.9	(*b*)	206.8
April	68.2	50.7	59.5	94.0	(*a*)	34.8	24/88	59.2	152.0	8/61	25.0	23/97	162.5
May	61.4	46.7	54.1	83.7	7/05	29.9	29/16	53.8	142.6	2/59	21.1	26/16	130.3
June	56.8	44.0	50.4	72.2	1/07	28.0	11/66	44.2	129.0	11/61	20.4	17/95	111.4
July	55.6	41.8	48.7	69.3	22/26	27.0	21/69	42.3	125.8	27/80	20.5	12/03	107.1
August	58.7	43.4	51.0	77.0	20/85	28.3	11/63	48.7	137.4	29/69	21.3	14/02	155.2
September ..	62.6	45.6	54.1	85.0	19/19	31.1	16/08	53.9	142.1	20/67	22.8	8/18	171.7
October	67.1	48.3	57.7	98.4	24/14	32.1	3/71	66.2	154.3	28/68	24.8	22/18	205.9
November.. ..	71.4	51.3	61.3	105.7	27/94	36.5	2/96	69.2	159.6	29/65	24.6	2/96	242.0
December.. ..	75.4	54.3	64.8	110.7	15/76	40.0	4/70	70.7	170.3	20/69	33.3	1/04	254.4
Year Averages ..	67.3	49.7	58.4	—		—		—	—		—		2255.5
Year Extremes ..	—	—	—	111.2	14.1.62	27.0	21/7/69	84.2	178.5	14/1/62	20.4	17/6/95	—

(*a*) 6/1865 and 17/1922. (*b*) 17/1884 and 20/1897.

HUMIDITY, RAINFALL, AND DEW.

Month.	Vapour Pressure (inches) Mean 9 a.m.	Rel. Hum. (%) Mean 9 a.m.	Rel. Hum. (%) Highest Mean.	Rel. Hum. (%) Lowest Mean.	Rainfall (inches). Mean Monthly.	Rainfall (inches). Mean No. of Days Rain.	Rainfall (inches). Greatest Monthly.		Rainfall (inches). Least Monthly.		Rainfall (inches). Greatest in One Day.		Dew. Mean No. Days Dew.
No. of yrs. over which observation extends	20	20	20	20	72	72	72		72		69		20
January	0.382	58	65	50	1.89	8	5.68	1904	0.04	1878	2.97	9/97	2.6
February	0.413	62	69	48	1.71	7	6.24	1904	0.03	1870	3.37	18/19	2.9
March	0.373	64	71	57	2.18	10	7.50	1911	0.18	1859	3.55	9/19	6.9
April	0.333	71	78	66	2.17	11	6.71	1901	Nil	1923	2.28	22/01	8.4
May	0.312	78	86	71	2.16	13	4.31	1862	0.45	1901	1.85	7/91	8.8
June	0.277	83	89	77	2.06	14	4.51	1859	0.73	1877	1.74	21/04	8.7
July	0.263	82	86	76	1.86	14	7.02	1891	0.57	1902	2.71	12/91	9.3
August	0.269	76	80	70	1.87	14	4.04	1924	0.48	1903	1.94	26/24	8.3
September ..	0.291	69	76	60	2.44	14	7.93	1916	0.52	1907	2.62	12/80	6.0
October	0.312	62	67	56	2.63	13	7.61	1869	0.29	1914	3.00	17/69	6.0
November.. ..	0.329	59	69	52	2.23	11	6.71	1916	0.25	1895	2.57	16/76	1.9
December.. ..	0.365	57	69	51	2.27	9	7.18	1863	0.11	1904	2.62	28/07	1.8
Year Totals ..	—	—	—	—	25.47	138	—		—		—		71.6
Year Averages ..	0.326	68	—	—	—	—	—		—		—		—
Year Extremes ..	—	—	89	48	—	—	7.93	9/1916	Nil	4/1923	3.55	5/3/19	—

CLIMATOLOGICAL DATA—HOBART, TASMANIA.

Lat. 42° 53′ S., Long. 147° 20′ E. Height above M.S.L., 177 Ft.

Barometer, Wind, Evaporation, Lightning, Clouds, and Clear Days.

Month.	Bar. corrected to 32° F. Mn. Sea Level and Standard Gravity from 9 a.m. and 3 p.m. readings.	Wind.						Mean Amount of Evaporation (inches).	No. of Days Lightning.	Mean Amount of Clouds, 9 a.m., 3 p.m. & 9 p.m.	No. of Clear Days.
		Greatest Number of Miles in One Day.		Mean Hourly Pressure. (lbs.)	Total Miles.	Prevailing Direction.					
						9 a.m.	3 p.m.				
No. of yrs. over which observation extends	43	17		17	17	22		17	20	65	21
January	29.831	500	30/16	0.19	5,968	N N W & N	S E	4.906	0.9	6.0	2.6
February	29.916	605	4/27	0.15	4.753	N	S E	3.741	1.3	6.0	2.4
March	29.942	443	19/27	0.13	4.960	N & N N W	S E	3.030	1.3	5.9	2.3
April	29.966	533	27/26	0.14	4.890	N W to N	N W & S E	2.032	0.8	6.1	1.6
May	29.982	423	15/27	0.13	4.798	N W to N	N & N W	1.403	0.5	6.1	2.2
June	29.951	569	27/20	0.13	4.667	N W & N N W	N to N W	0.903	0.6	6.1	2.1
July	29.928	425	16/21	0.13	4.805	N N W & N W	N to N W	0.916	0.5	5.8	2.5
August	29.924	612	19/26	0.14	5.006	N & N N W	N & N W	1.287	0.5	6.0	2.0
September ..	29.852	516	26/15	0.18	5.508	N N W & N	N W & S E	2.004	0.8	6.1	1.6
October	29.828	461	8/12	0.19	5,988	N	S E	3.185	0.8	6.3	1.4
November ..	29.805	508	18/15	0.20	5,851	N	S E	4.102	0.9	6.3	1.6
December ..	29.808	486	30/20	0.18	5,741	N	S E	4.599	1.1	6.3	1.2
Year Totals ..	—	—		—	—	—		32.122	10.0	—	23.5
Year Averages ..	29.894	—		0.16	5.245	N to N W	S E & N W	—	—	6.0	—
Year Extremes ..	—	612	19/8/26	--	—	—		—	—	—	—

Temperature and Sunshine.

Month.	Mean Temperature (Fahr.).			Extreme Shade Temperature (Fahr.).				Extreme Range.	Extreme Temperature (Fahr.).				Mean Hours of Sunshine.
	Mean Max.	Mean Min.	Mean	Highest.		Lowest.			Highest in Sun.		Lowest on Grass.		
No. of yrs. over which observation extends	57	57	57	81		81		81	40		60		33
January	71.2	52.9	62.0	105.0	(*a*)	40.3	(*b*)	64.7	160.0	(*c*)	30.6	19/97	212.9
February	71.3	53.3	62.3	104.4	12/99	39.0	20/87	65.4	165.0	24/98	28.3	–/87	179.6
March	67.9	50.7	59.3	99.0	–/61	35.2	31/26	63.6	150.0	3/05	27.5	30/02	175.4
April	62.7	47.6	55.2	90.0	1/56	30.0	25/56	60.0	142.0	18/93	25.0	–/86	141.3
May	57.3	43.7	50.5	77.8	5/21	29.2	20/02	48.6	128.0	(*d*)	20.0	19/02	132.0
June	52.8	41.1	47.0	75.0	7/74	28.0	22/79	47.0	122.0	12/94	21.0	6/87	104.0
July	52.0	39.4	45.7	72.0	22/77	27.0	18/66	45.0	121.0	12/93	18.7	16/86	123.7
August	55.0	41.0	48.0	81.0	21/72	30.0	10/73	51.0	129.0	–/87	20.1	7/09	145.0
September ..	58.8	43.2	51.0	81.7	23/26	30.0	12/41	51.7	138.0	23/93	18.3	16/26	147.0
October	62.7	45.5	54.1	92.0	24/14	32.0	12/89	60.0	156.0	9/93	23.8	(*e*)	171.6
November ..	66.1	48.2	57.2	98.0	20/88	35.2	5/13	62.8	154.0	19/92	26.0	1/08	202.6
December ..	69.3	51.2	60.2	105.2	30/97	38.0	13/06	67.2	157.0	30/18	27.2	–/86	199.6
Year Averages ..	62.3	46.5	54.4	—		—			—		—		1934.7
Year Extremes ..	—	—	—	105.2	30/12/97	27.0	18/7/66	78.2	165.0	24/2/98	18.3	16/9/26	—

(*a*) 27/49 and 1/00. (*b*) 3/72, 2/06, and 27/13. (*c*) 5/86 and 13/05. (*d*) –/89 and –/93. (*e*) 1/86 and –/99.

Humidity, Rainfall, and Dew.

Month.	Vapour Pressure (inches)	Rel. Hum. (%)			Rainfall (inches).								Dew.
	Mean 9 a.m.	Mean 9 a.m.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean No. of Days Rain.	Greatest Monthly.		Least Monthly.		Greatest in One Day.		Mean No. Days Dew.
No. of yrs. over which observation extends	41	41	41	41	85	84	85		85		61		18
January	0.336	59	72	47	1.83	10	5.91	1893	0.03	1841	2.96	30/16	0.7
February	0.356	63	77	53	1.48	9	9.15	1854	0.07	1847	4.50	25/54*a*	1.7
March	0.329	66	77	58	1.70	10	7.60	1854	0.02	1843	2.79	5/19	4.8
April	0.299	72	84	58	1.85	11	6.50	1909	0.07	1904	5.02	20/09	9.8
May	0.268	77	89	65	1.90	13	6.37	1905	0.10	1843	3.22	14/58	12.5
June	0.243	81	91	68	2.23	14	8.15	1889	0.22	1852	4.11	14/89	8.5
July	0.231	81	94	72	2.18	14	6.02	1922	0.30	1850	2.51	18/22	8.2
August	0.239	76	92	64	1.83	14	10.16	1858	0.23	1854	4.35	12/58	8.6
September ..	0.257	68	85	60	2.07	15	7.14	1844	0.39	1847	3.50	29/44	4.7
October	0.271	63	73	51	2.26	15	6.67	1906	0.26	1850	2.58	4/06	2.8
November ..	0.296	60	72	50	2.47	14	8.92	1849	0.16	1868	3.97	6/49	1.1
December ..	0.316	57	67	45	1.99	11	9.00	1875	0.11	1842	2.48	13/16	0.8
Year Totals ..	—	—	—	—	23.79	150	—		—		—		64.2
Year Averages ..	0.281	67	—	—	—	—	—		—		—		—
Year Extremes ..	—	—	94	45	—	—	10.16	8/1858	0.02	3/1843	5.02	20/4/09	—

(*a*) 4.18 on 26/54 also.

CHAPTER III.

GENERAL GOVERNMENT.

§ 1. Scheme of Parliamentary Government.

1. **General.**—The legislative power of the Commonwealth is vested in the Parliament of the Commonwealth, which consists of the Sovereign, the Senate, and the House of Representatives. The Sovereign is represented throughout the Commonwealth by the Governor-General who, subject to the Constitution of the Commonwealth, has such powers and functions as the Sovereign is pleased to assign to him. In each State there is a State Governor, who is the representative of the Sovereign for the State, and who exercises such powers within the State as are conferred upon him by the Letters Patent which constitute his office, and by the instructions which inform him in detail of the manner in which his duties are to be fulfilled. The Legislature in each State was bi-cameral till 1922, in which year the Queensland Parliament became uni-cameral. In the bi-cameral States it consists of (*a*) a Legislative Council and (*b*) a Legislative Assembly, or House of Assembly. In Queensland the Legislative Assembly constitutes the legislature. In the Commonwealth Parliament the Upper House is known as the Senate, and in the State Parliaments as the Legislative Council. The Lower House in the bi-cameral States is known as follows :—In the Commonwealth Parliament as the House of Representatives, in the State Parliaments of New South Wales, Victoria, and Western Australia as the Legislative Assembly, and in the State Parliaments of South Australia and Tasmania as the House of Assembly. The legislative powers of these Parliaments are delimited by the Commonwealth and the State Constitutions. The Assembly (Queensland as pointed out is uni-cameral), which is usually the larger, is always elective, the qualifications for the franchise varying in character. The Council is, in the case of New South Wales, nominated by the Governor in Council ; in other States it is elective, the constituencies being differently arranged and some property or special qualification for the electorate being required. In the Federal Parliament, the qualifications for the franchise are identical for both Houses. A brief account of the constitutional history of each of the States is given in Chapter I., and a conspectus of the Constitutions of the Commonwealth and States in Year Book No. 13, pp. 927 to 951. The information given therein respecting Queensland must of course be considerably modified in view of the abolition of the Upper House in 1922.

2. **Powers and Functions of the Governor-General and of the State Governors.**—A detailed statement of the powers and functions of the Governor-General and of the State Governors will be found in preceding issues of the official Year Book (see No. 18, pp. 78 to 80), but considerations of space preclude the repetition of this information in the present volume.

3. **Governor-General and State Governors.**—The present Governor-General is the Right Honourable John Lawrence, Baron Stonehaven, P.C., G.C.M.G., D.S.O. He assumed office on the 8th October, 1925.

The following is a list of the Governors of the various States of the Commonwealth :—

New South Wales ..	Admiral Sir Dudley Rawson Stratford de Chair, K.C.B., M.V.O.
Victoria	Lieut.-Colonel the Rt. Hon. Arthur Herbert Tennyson, Baron Somers, K.C.M.G., D.S.O., M.C.
Queensland ..	Lieut.-General Sir Thomas Herbert John Chapman Goodwin, K.C.B., C.M.G., D.S.O.
South Australia ..	Brigadier-General Sir Alexander Gore Arkwright Hore-Ruthven, V.C., K.C.M.G., C.B., D.S.O.
Western Australia ..	Colonel Sir William Robert Campion, K.C.M.G., D.S.O.
Tasmania	Captain Sir James O'Grady, K.C.M.G., O.B.E., J.P.

4. **The Cabinet and Executive Government.**—(i) *General.* The sections of the Commonwealth Constitution Act dealing with the Executive Government will be found in Chapter I. In both the Commonwealth and the State Legislatures the forms of government have been founded on their prototypes in the Imperial Government,

and the relations established between the Ministry and the representatives of the people are in accordance with those prevailing in Great Britain. The executive powers in the Commonwealth are vested in the Governor-General in Council, and in the State Governments in the Governor in Council. The Executive Council in the Commonwealth and in the majority of the States is practically co-extensive with a group of departmental chiefs, who are usually spoken of as the Cabinet, and who change with the rise and fall of party majorities. In the Commonwealth Government, however, as well as in the States of Victoria and Tasmania, the Cabinet on leaving office remain members of the Executive Council, though they no longer attend its meetings, and it is in fact an essential feature of the Cabinet system of Government that they should not do so, except to assist the Governor in transacting purely formal business, or to advise on non-political questions.

(ii) *The Executive Council.* This body is composed of the Governor and the Ministers of State holding office for the time being. The latter are sworn both as Executive Councillors and as Ministers controlling the different administrative departments. It should be observed that all persons living who have held Ministerial office under former Governments are also technically members of the Executive Council, and are thus liable to be specially summoned for attendance at meetings of that body. The meetings are official in character; they are presided over by the Governor-General (or Governor) and are attended by the clerk, who keeps a formal record of the proceedings. At these meetings tne decisions of the Cabinet are put into official form and made effective, appointments are confirmed, resignations accepted, proceedings ordered, and notices and regulations published.

(iii) *The Appointment of Ministers and of Executive Councillors.* Although it is technically possible for the Governor to make and unmake cabinets at his pleasure, under all ordinary circumstances his apparent liberty in choosing his Executive Council is virtually restricted by the operation of constitutional machinery. When a Ministry is defeated in Parliament or at the polls, the procedure both in the Commonwealth and the State Parliaments generally, though not invariably, follows that prevailing in the Imperial Parliament. The customary procedure in connexion with the resignation or acceptance of office by a Ministry is described fully in previous issues of the Year Book. (See No. 6, page 942.)

(iv) *Ministers in Upper or Lower Houses.* The subjoined table shows the number of Ministers with seats in the Upper or Lower Houses of each Parliament in May, 1928.

AUSTRALIAN PARLIAMENTS—MINISTERS IN UPPER OR LOWER HOUSES, 1928.

Ministers with Seats in—	C'wealth.	N.S.W.	Vict.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
The Upper House ..	4	2	4	..	2	2	1	15
The Lower House ..	8	11	8	10	4	7	5	53
Total	12	13	12	10	6	9	6	68

(v) *The Cabinet.* (*a*) *General.* The meetings of this body are private and deliberative. The actual Ministers of the day are alone present no records of the meetings transpire, and no official notice is taken of the proceedings. The members of the Cabinet, being the leaders of the party in power in Parliament, control the bent of legislation, and must retain the confidence of the people and also of the Governor-General (or Governor), to whom they act as an advising body. They also in effect wield, by virtue of their seats on the Executive Council, the whole executive force of the community. In summoning, proroguing, or dissolving Parliament, the Governor-General (or Governor) is usually guided by the advice tendered him by the Cabinet, though legally in no way bound to accept such advice.

(*b*) *Commonwealth Ministers of State.* A statement showing the names of Ministers of State who have held office from the inauguration of the Commonwealth Government to 1925 will be found in Official Year Book No. 18, pages 82 and 83, but considerations of space preclude its inclusion in the present issue.

(*c*) *State Ministries.* A list of the members of the Ministry in each State in May, 1928, will be found in § 3 of this chapter.

5. **Number and Salary of Members of the Legislatures.**—The following table shows the number and annual salary of members in each of the legislative chambers in May, 1928 :—

MEMBERS OF COMMONWEALTH AND STATE PARLIAMENTS, AND ANNUAL SALARIES, 1928.

Members in—	C'wealth.	N.S.W.	Vict.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
MEMBERS.								
Upper House ..	36	101	34	(*a*)	20	30	18	239
Lower House ..	76	90	65	72	46	50	30	429
Total ..	112	191	99	72	66	80	48	668
ANNUAL SALARY.								
	£	£	£	£	£	£	£	
Upper House ..	1,000	..	200	(*a*)	400	600	375–500	..
Lower House ..	1,000	875	500	750	400	600	400–500	..

(*a*) Council abolished in 1922.

The use of the expressions "Upper House" and "Lower House" in the above statement, though not justified constitutionally, is convenient, inasmuch as the legislative chambers are known by different names in the Commonwealth and in some of the States.

6. **Enactments of the Parliament.**—In the Commonwealth, all laws are enacted in the name of the Sovereign, the Senate, and the House of Representatives. The subjects with respect to which the Commonwealth Parliament is empowered to make laws are enumerated in the Constitution Act (see Chapter I.). In the States, laws are enacted in the name of the Sovereign by and with the consent of the Legislative Council (except in Queensland) and Legislative Assembly or House of Assembly. The Governor-General or the State Governor acts as Viceroy as regards giving the Royal assent to or vetoing Bills passed by the Legislatures, or reserving them for the special consideration of the Sovereign. In the States, the Councils and Assemblies are empowered generally, subject to the Commonwealth Constitution, to make laws in and for their respective States, in all cases whatsoever. Subject to certain limitations, they may alter, repeal, or vary their Constitution. Where a law of a State is inconsistent with a law of the Commonwealth the latter prevails, and the former is, to the extent of the inconsistency, invalid.

§ 2. Parliaments and Elections.

1. **Qualifications for Membership and for Franchise.**—The conspectus in § 4 of "General Government" in Year Book No. 13 contains particulars, as in 1920, relating to the legislative chambers in the Commonwealth and State Parliaments, and shows concisely the qualifications necessary for membership and for the franchise in each House. (These are, in the main, applicable in 1927, but it must be remembered that Queensland abolished the Upper House in 1922). It has further to be remembered that in 1925 the Common-

wealth Parliament passed an Act removing the disqualification on racial grounds from (*a*) natives of British India and (*b*) persons who have become naturalized. Disqualification of persons otherwise eligible, either as members or voters, is generally on the usual grounds of being of unsound mind or attainted of treason, being convicted of certain offences, and, as regards membership, on the grounds of holding a place of profit under the Crown, being pecuniarily interested in a Government contract except as a member of an incorporated company of more than twenty-five persons, or being an undischarged bankrupt.

2. The Federal Government.—The Senate consists of 36 members, six being returned by each of the original federating States. Members of this Chamber are elected for a term of six years, but by a provision in the Constitution half the members retire at the end of every third year, although they are eligible for re-election. In accordance with the Constitution, the total number of members of the House of Representatives must be as nearly as possible double that of the Senate. In the House of Representatives the States are represented on a population basis, and the numbers stand at present as follows :—New South Wales, 28 ; Victoria, 20 ; Queensland, 10 ; South Australia, 7 ; Western Australia, 5 ; Tasmania, 5 ; Northern Territory, 1—total, 76. The Constitution provides for a minimum of five members for each original State. Members of the House of Representatives are elected for the duration of the Parliament, which is limited to three years. In elections for Senators, the whole State constitutes the electorate. For the purposes of elections for the House of Representatives, the State is divided into single electorates corresponding in number with the number of members to which the State is entitled. Members of both Houses are paid at the rate of £1,000 per annum. Further information regarding the Senate and the House of Representatives is given in Chapter I.

3. Federal Elections.—There have been nine complete Parliaments since the inauguration of Federation. The fifth Parliament, which was opened on the 9th July, 1913, was dissolved on the 30th July, 1914, in somewhat unusual circumstances. Under Section 57 of the Constitution, it is provided that, should the Senate fail to pass, or pass with amendments, any proposed law previously passed by the House of Representatives, and should the latter House, after an interval of three months, again pass the proposed law, with or without the amendments of the Senate, and the Senate for a second time reject it or pass it with amendments to which the lower House will not agree, then the Governor-General may dissolve the two Houses simultaneously. For the first time in the history of the Commonwealth this deadlock between the Senate and the House of Representatives occurred in the second session of the fifth Parliament, and, in accordance with the section of the Constitution referred to above, both Houses were dissolved by the Governor-General. The first session of the tenth Parliament opened on the 13th January, 1926. The first meeting at Parliament House, Canberra, was opened by H.R.H. the Duke of York on 9th May, 1927. Particulars regarding the last five Commonwealth elections may be found in the table given hereunder :—

FEDERAL ELECTIONS, 1914 to 1925.

Date.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted.		
	Males.	Fem.	Total.	Males.	Fem.	Total.	Males.	Fem.	Total.
THE SENATE.									
5th September, 1914 ..	1,478,468	1,333,047	2,811,515	1,139,933	902,403	2,042,336	77.10	67.69	72.64
5th May, 1917 ..	1,444,133	1,391,194	2,835,327	1,184,663	1,018,138	2,202,801	82.03	73.18	77.69
13th December, 1919 ..	1,439,818	1,410,044	2,849,862	1,094,534	938,403	2,032,937	76.02	65.55	71.33
16th December, 1922 ..	1,494,508	1,487,916	2,982,424	966,551	761,695	1,728,246	64.67	51.19	57.95
14th November, 1925 ..	1,656,286	1,645,730	3,302,016	1,515,608	1,499,345	3,014,953	91.51	91.11	91.31
THE HOUSE OF REPRESENTATIVES. (CONTESTED ELECTORATES.)									
5th September, 1914 ..	1,225,990	1,122,451	2,348,441	954,768	772,138	1,726,906	77.88	68.79	73.53
5th May, 1917 ..	1,262,527	1,207,938	2,470,465	1,041,552	892,926	1,934,478	82.50	73.92	78.30
13th December, 1919 ..	1,395,165	1,367,468	2,762,633	1,063,029	914,816	1,977,845	76.19	66.90	71.59
16th December, 1922 ..	1,396,020	1,378,254	2,774,274	920,177	726,686	1,646,863	65.91	52.72	59.36
14th November, 1925 ..	1,635,842	1,632,897	3,268,739	1,499,006	1,488,194	2,987,200	91.63	91.14	91.39

The percentage of electors who exercised the franchise at each election rose from 53.04 for the Senate and 55.69 for the House of Representatives in 1901 to 77.69 and 78.30 respectively in 1917. The next election in 1919 showed a considerable falling off, and in 1922 the decrease was still more marked, the respective percentages for that year being 57.95 and 59.36, or very little more than those for 1901. The Elections of 1925 were the first held since the introduction of Compulsory Voting, the result of which was reflected in the high percentage of voters, viz., 91.31 for the Senate and 91.39 for the House of Representatives.

4. **Federal Referenda.**—According to section 128 of the Constitution, any proposed law for the alteration of the Constitution must, in addition to being passed by an absolute majority of each House of Parliament, be submitted to a referendum of the electors in each State, and must further be approved by a majority of the States and of the electors who voted before it can be presented for Royal Assent. Several referenda have been held from time to time, but in two cases only has any proposed law been assented to by the required majority of the electors. A statement dealing with the various referenda up to and inclusive of the year 1919, and the voting thereon was given in previous issues of the Official Year Book (See No. 18, pp. 87 to 89), but space will not permit of the incorporation of this information in the present volume. In the year 1926 a referendum was held in relation to proposed laws entitled respectively "Industry and Commerce" and "Essential Services." The result of the voting was: Industry and Commerce, votes in favour, 1,247,088; votes not in favour, 1,619,655. Essential Services, votes in favour, 1,195,502; votes not in favour, 1,597,793.

5. **The Parliament of New South Wales.**—(i) *Constitution.* The Legislative Council in this State is a nominee chamber, the Legislative Assembly being an elective body. Theoretically the Legislative Council may contain an unlimited number of members, and the number of members in May, 1928, was one hundred and one. The tenure of the seat is for life; four-fifths of the members must be persons not holding any paid office under the Crown, but this is held not to include officers of His Majesty's sea or land forces on full or half-pay, or retired officers on pensions. The Legislative Assembly consists of ninety members elected in single-seat electoral districts, who hold their seats during the existence of the Parliament to which they are elected. The duration of Parliament is limited to three years.

(ii) *Particulars of Elections.* Since the introduction of responsible government in New South Wales there have been twenty-seven Parliaments, the first of which opened on the 22nd May, 1856, and was dissolved on the 19th December, 1857, while the twenty-seventh opened on the 24th June, 1925. The last-mentioned Parliament was elected on the 30th May, 1925. The proportional representation system came into operation at the election of 1922. Particulars of voting at elections from 1917 to 1927 are given below:—

LEGISLATIVE ASSEMBLY ELECTIONS, NEW SOUTH WALES, 1917 to 1927.

Year.	Electors Qualified to Vote.			Electors who Voted.			Percentage of Electors who Voted in Contested Electorates.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1917	574,308	535,522	1,109,830	328,030	295,354	623,384	62.40	60.57	61.52
1920	593,244	561,193	1,154,437	363,115	285,594	648,709	61.21	50.89	56.19
1922	636,662	614,361	1,251,023	466,949	408,515	875,464	73.34	66.49	69.98
1925	678,749	660,331	1,339,080	489,126	435,853	924,979	72.06	66.00	69.07
1927	714,886	694,607	1,409,493	(*a*)	(*a*)	1,150,777	(*a*)	(*a*)	82.54

(*a*) Not available.

The principle of one elector one vote was adopted in 1894, and that of compulsory enrolment in 1922.

The franchise was extended to women (Women's Franchise Act) in 1902, and was exercised for the first time at a State election in 1904.

6. The Parliament of Victoria.—(i) *Constitution.* Both of the Victorian legislative chambers are elective bodies, but there is a considerable difference in the number of members of each House, as well as in the qualifications necessary for members and electors. The number of members in the Upper House in May, 1928, was 34, and in the Lower House, 65. In the Legislative Council the tenure of the seat is for six years, but one member for each province retires every third year, except in the case of a dissolution, when one-half of the newly-elected members hold their seats for three years only. Members of the Legislative Assembly are elected for the duration of Parliament, which is limited to three years. An elector for the Legislative Assembly may vote once only, plurality of voting having been abolished in 1899; an elector, however, qualified in more than one district, may select that for which he desires to record his vote. A preferential system of voting (see Year Book No. 6, page 1182) was for the first time adopted in Victoria at the election held in November, 1911.

(ii) *Particulars of Elections.* Since the introduction of responsible government in Victoria there have been twenty-eight complete Parliaments, the first of which opened on the 21st November, 1856, and closed on the 9th August, 1859, while the twenty-eighth was dissolved on the 4th March, 1927. The twenty-ninth Parliament was opened on 6th July, 1927. The election for the Legislative Assembly in 1927 was the first held since the institution of compulsory voting. Particulars of voting at the last five elections are given in the subjoined table:—

VICTORIAN ELECTIONS, 1913 to 1927.

LEGISLATIVE COUNCIL (LAST ELECTION 1925).

Year.	Electors Enrolled.	Electors Enrolled in Contested Electorates.	Electors who Voted.	Percentage of Electors who Voted in Contested Electorates.
1913	270,175	99,646	47,666	47.89
1916	300,321	92,421	34,853	37.71
1919	317,593	133,058	40,393	30.35
1922	353,440	161,731	47,008	29.07
1925	399,510	172,875	56,033	32.41

LEGISLATIVE ASSEMBLY.

Year.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted in Contested Electorates.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1917	397,585	430,645	828,230	172,317	184,682	356,999	54.30	54.12	54.21
1920	418,085	450,763	868,848	232,604	235,621	468,225	66.23	61.38	63.70
1921	414,818	456,638	871,456	167,812	158,415	326,227	61.29	53.53	57.26
1924	433,357	467,070	900,427	190,153	180,810	370,963	63.02	55.72	59.24
1927	480,485	512,726	993,211	377,941	402,458	780,399	92.02	91.51	91.76

The franchise was extended to women by the Adult Suffrage Act 1908 and voting at elections was made compulsory in 1926.

Particulars of the Legislative Council elections held in June, 1928, will, if available, be found in the Appendix.

7. The Parliament of Queensland.—(i) *Constitution.* As pointed out previously, the Legislative Council in Queensland was abolished in 1922, the date of Royal assent to the Act being the 23rd March. The Legislative Assembly is composed of seventy-two members, and the State is divided into that number of electoral districts. A modified system of optional preferential voting is in operation in Queensland. (See Year Book No. 6, page 1183.)

(ii) *Particulars of Elections.* Since the establishment of responsible government in Queensland there have been twenty-three complete Parliaments, the first of which opened on the 29th May, 1860, and dissolved on the 20th May, 1863, while the twenty-third

Parliament opened on the 10th July, 1923, and closed on the 8th April, 1926. The first session of the twenty-fourth Parliament opened on 28th July, 1926. At the elections held in May, 1915, the principle of compulsory voting was introduced for the first time in Australia. Of the total number of electors enrolled at the 1926 elections, 89.94 per cent. went to the polls. Statistics regarding the last five elections for which details are available are given below.

QUEENSLAND LEGISLATIVE ASSEMBLY ELECTIONS, 1915 to 1926.

Year.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted in Contested Electorates.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1915	184,627	150,568	335,195	140,396	125,844	266,240	86.46	90.09	88.14
1918	233,342	191,074	424,416	176,768	163,901	340,669	75.75	85.78	80.27
1920	238,750	206,931	445,681	187,575	168,651	356,226	78.57	81.50	79.93
1923	257,001	219,476	476,477	194,287	174,980	369,267	80.72	83.96	82.23
1926	253,571	224,526	478,097	209,139	191,916	401,055	89.77	90.13	89.94

The election of 1907 was the first State election in Queensland at which women voted, the privilege being conferred under the Elections Acts Amendment Act 1905.

8. The Parliament of South Australia.—(i) *Constitution.* In this State there is a Legislative Council composed of twenty members and a House of Assembly with forty-six members, both chambers being elective. The State is divided into five districts, which return four members each to the Legislative Council. For the House of Assembly, eight districts return three members each, and eleven districts two members each.

(ii) *Particulars of Elections.* Since the inauguration of responsible government in South Australia there have been twenty-five complete Parliaments, the first of which was opened on the 22nd April, 1857. The first session of the twenty-sixth Parliament began on the 17th May, 1927. Particulars of voting at recent elections are given below :—

SOUTH AUSTRALIAN ELECTIONS, 1915 to 1927.

Year.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted in Contested Electorates.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females	Total.
LEGISLATIVE COUNCIL.									
1915	66,614	21,635	88,249	11,436	4,808	16,244	75.69	71.25	74.32
1918	71.510	23,461	94,971	42,987	11,800	54,787	60.11	50.30	57.69
1921	69,986	23.062	93,048	38,597	11,309	49,906	64.23	53.96	61.57
1924	67,429	22,018	89,447	36.626	10,492	47,118	65.79	54.94	63.02
1927	100,376	37,395	137,771	46,686	17,742	64,428	67.55	59.91	65.26
HOUSE OF ASSEMBLY.									
1915	128,594	124,797	253,391	70,898	65,157	136,055	77.22	72.64	74.95
1918	126,669	132,043	258,712	71,501	62,742	134.243	56.45	47.52	51.89
1921	134,091	137,931	272,022	91,451	77,600	169,051	70.10	57.64	63.77
1924	141,944	147.899	289,843	87,712	73.453	161.165	69.65	56.05	62.71
1927	152,997	156,591	309,588	110,127	104,611	214,738	80.64	74.31	77.43

It is interesting to note that South Australia was the first of the States to grant women's suffrage (under the Constitution Amendment Act 1894), the franchise being exercised for the first time at the Legislative Assembly election on the 25th April, 1896.

9. The Parliament of Western Australia.—(i) *Constitution.* In this State both Chambers are elective. For the Legislative Council there are thirty members, each of the ten Provinces returning three members, while the Legislative Assembly is composed of fifty members, one member being returned by each of the fifty electoral districts. At the expiration of two years from the date of election to a seat in the Legislative Council, and every two years thereafter, the junior member for the time being for each province retires. Seniority is determined (*a*) by date of election, (*b*) if two or more members are elected on the same day, then the junior is the one who polled the least number of votes, (*c*) if the election be uncontested, or in case of an equality of votes, then the seniority is determined by the alphabetical precedence of surnames and, if necessary, Christian names. Members of the Legislative Assembly are elected for three years.

(ii) *Particulars of Elections.* Since the establishment of responsible government in Western Australia there have been twelve complete Parliaments, the first of which was opened on the 30th December, 1890, while the thirteenth Parliament was elected on 26th March, and 9th April, 1927. The preferential system of voting in use in Western Australia is described in Year Book No. 6, page 1184. Particulars relating to recent Assembly and Council elections are given in the tables below :—

WESTERN AUSTRALIAN ELECTIONS, 1914 to 1927.

Year.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted in Contested Electorates.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
				LEGISLATIVE COUNCIL.					
1918	46,272	14,700	60,972	14,043	3,930	17,973	39.04	31.83	37.20
1920	37,137	14,900	52,037	12,450	3,406	15,856	45.07	28.28	40.27
1922	40,360	14,838	55,198	17,524	4,763	22,287	46.16	33.81	42.82
1924	43,897	14,904	58,801	16,552	4,569	21,121	47.06	39.25	45.12
1926	39,566	15,120	54,686	23,956	8,136	32,092	60.55	53.80	58.68

(Particulars of the Legislative Council elections held in May, 1928, if available, will be inserted in the Appendix).

Year.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted in Contested Electorates.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
				LEGISLATIVE ASSEMBLY.					
1914	126,598	88,143	214,741	54,612	41,993	96,605	56.59	58.29	57.32
1917	93,106	73,845	166,951	45,453	40,167	85,620	59.46	65.51	62.15
1921	89,523	75,165	164,688	54,747	44,211	98,958	69.16	65.22	67.34
1924	101,717	88,152	189,869	55,591	43,800	99,391	66.00	59.00	62.32
1927	113,072	97,877	210,949	76,307	66,199	142,506	74.32	72.42	73.42

Women's suffrage was granted by the Electoral Act of 1899. At the 1921 elections the first woman member elected to an Australian Parliament was returned.

10. The Parliament of Tasmania.—(i) *Constitution.* In Tasmania there are two legislative chambers—the Legislative Council and the House of Assembly, both bodies being elective. The Council consists of eighteen members, returned from fifteen districts, Hobart returning three, Launceston two, and the remaining thirteen districts sending one member each. There are five House of Assembly districts corresponding to the Commonwealth electoral districts, each returning six members, who are elected under a system of proportional representation which first came into force at the 1909 elections. (See Year Book No. 6, page 1185.) The annual salaries of members of the House of Assembly range from £400 to £500, and of the Legislative Council from £370 to £500, according to the area of the electorate and the distance from the capital.

In 1924 and again in 1925 the House of Assembly contested, with at least temporary success, the power of the Legislative Council to amend money bills. The matter was settled by "The Constitution Act 1926," which provides that all money bills shall originate in the Assembly, that all money votes shall be recommended by the Governor, and that the Council may amend bills other than those for appropriating public moneys or fixing a rate for income or land tax. The Council has no power to insert a provision for the appropriation of money or the imposing of a burden on the people.

(ii) *Particulars of Elections.* The first Tasmanian Parliament opened on 2nd December, 1856, and closed on 8th May, 1861. There have been twenty-one complete Parliaments since the inauguration of responsible government. Particulars of the voting at the last five elections for the House of Assembly are given hereunder :—

TASMANIAN ELECTIONS, HOUSE OF ASSEMBLY, 1913 to 1925.

Year.	Electors Enrolled.			Electors who Voted.			Percentage of Electors who Voted in Contested Electorates.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1913	53,372	51,920	105,292	38,700	32,102	70,802	72.51	61.83	67.24
1916	54,466	52,855	107,321	41,427	37,557	78,984	76.06	71.05	73.60
1919	53,205	54,336	107,541	37,037	34,027	71,064	69.61	62.62	66.08
1922	54,958	55,591	110,549	38,457	31,295	69,752	69.96	56.30	63.09
1925	56,667	58,234	114,901	41,322	35,959	77,281	72.92	61.81	67.25

The present members of the Legislative Council have been elected at various dates, and the following particulars are given of the last contested election in each case—number of electors on the roll, 45,833 ; number of votes recorded, male 18,633, female 5,464, total 24,097 ; percentage of persons who voted to the number on the roll, 52.58.

The suffrage was granted to women under the Constitution Amendment Act 1 903.

§ 3. Administration and Legislation.

1. The Commonwealth Parliaments.—The first Parliament of the Commonwealth was convened by proclamation dated 29th April, 1901, by His Excellency the late Marquis of Linlithgow, then Earl of Hopetoun, Governor-General. It was opened on the 9th May following by H.R.H. the Duke of Cornwall and York, who had been sent to Australia for that purpose by His Majesty the King ; the Rt. Hon. Sir Edmund Barton, P.C., G.C.M.G., K.C., being Prime Minister.

The following table gives the number and duration of Parliaments since Federation :—

COMMONWEALTH PARLIAMENTS, 1901 TO 1927.

Number of Parliament.	Date of Opening.	Date of Dissolution.
First	29th April, 1901 ..	23rd November, 1903
Second	2nd March, 1904 ..	12th October, 1906
Third	20th February, 1907 ..	19th February, 1910
Fourth	1st July, 1910 ..	23rd April, 1913
Fifth	9th July, 1913 ..	30th July, 1914 (*a*)
Sixth	8th October, 1914 ..	26th March, 1917
Seventh	14th June, 1917 ..	3rd November, 1919
Eight	26th February, 1920 ..	6th November, 1922
Ninth	28th February, 1923 ..	3rd October, 1925
Tenth	13th January, 1926 ..	

(*a*) On this occasion the Governor-General, acting on the advice of the Ministry, and under section 57 of the Constitution, granted a dissolution of both the Senate and the House of Representatives, this being the first occasion since Federation on which a dissolution of both Houses had occurred.

2. **Governors-General and Ministries.**—The following statements show the names of the several Governors-General, and the Ministries which have directed the administration of the affairs of the Commonwealth since its creation :—

(*a*) Governors-General.

Rt. Hon. Earl of Hopetoun (afterwards Marquis of Linlithgow), P.C., K.T., G.C.M.G., G.C.V.O. Sworn 1st January, 1901 ; recalled 9th May, 1902.

Rt. Hon. Hallam Baron Tennyson, G.C.M.G. (Act. Governor-General). Sworn 17th July, 1902.

Rt. Hon. Hallam Baron Tennyson, G.C.M.G. (Governor-General). Sworn 9th January, 1903 ; recalled 21st January, 1904.

Rt. Hon. Henry Stafford Baron Northcote, P.C., G.C.M.G., G.C.I.E., C.B. Sworn 21st January, 1904 ; recalled 8th September, 1908.

Rt. Hon. William Humble Earl of Dudley, P.C., G.C.M.G., G.C.V.O., etc. Sworn 9th September, 1908 ; recalled 31st July, 1911.

Rt. Hon. Thomas Baron Denman, P.C., G.C.M.G., K.C.V.O. Sworn 31st July, 1911 ; recalled 16th May, 1914.

Rt. Hon. Sir Ronald Craufurd Munro Ferguson (afterwards Viscount Novar of Raith), P.C., G.C.M.G. Sworn 18th May, 1914 ; recalled 5th October, 1920.

Rt. Hon. Henry William Baron Forster of Lepe, P.C., G.C.M.G. Sworn 6th October, 1920 ; recalled 7th October, 1925.

Rt. Hon. John Lawrence Baron Stonehaven, P.C., G.C.M.G., D.S.O. Sworn 8th October, 1925.

(*b*) Ministries.

(i) Barton Government, 1st January, 1901, to 23rd September, 1903.
(ii) First Deakin Government, 23rd September, 1903, to 26th April, 1904.
(iii) Watson Government (Labour), 26th April to 17th August, 1904.
(iv) Reid-McLean Government, 17th August, 1904, to 4th July, 1905.
(v) Second Deakin Government, 4th July, 1905, to 12th November, 1908.
(vi) First Fisher Government (Labour), 12th November, 1908, to 2nd June, 1909.
(vii) Third Deakin Government, 2nd June, 1909, to 29th April, 1910.
(viii) Second Fisher Government (Labour), 29th April, 1910, to 24th June, 1913.
(ix) Cook Government, 24th June, 1913, to 17th September, 1914.
(x) Third Fisher Government (Labour), 17th September, 1914, to 27th October, 1915.
(xi) First Hughes Government (Labour), 27th October, 1915, to 14th November, 1916.
(xii) Second Hughes Government (Labour), 14th November, 1916, to 17th February, 1917.
(xiii) Australian National War Government, 17th February, 1917, to 10th January, 1918.
(xiv) Australian National War Government, 10th January, 1918, to 9th February, 1923.

(*c*) Bruce-Page Government from 9th February, 1923.

Departments.	Ministers.
Prime Minister and Minister for External Affairs	Rt. Hon. Stanley Melbourne Bruce, C.H., P.C., M.C.(*a*)
Treasurer	Hon. Earle Christmas Grafton Page.
Vice-President of the Executive Council	Hon. Llewelyn Atkinson (to 18/6/'26). Rt. Hon. Sir George Foster Pearce, K.C.V.O., P.C. (from 18/6 '26)
Attorney-General	Hon. Sir Littleton Ernest Groom, K.C.M.G., K.C. (to 18/12/'25).(*b*) Hon. John Greig Latham, C.M.G., K.C. (from 18/12/'25).
Postmaster-General	Hon. William Gerrand Gibson.
Minister for Trade and Customs	Hon. Austin Chapman (to 26/5/'24).(*c*) Hon. Sir Littleton Ernest Groom, K.C.M.G., K.C. (from 29/5/'24 to 13/6/'24). Hon. Herbert Edward Pratten (from 13/6/'24 to 7/5/'28).(*d*) Rt. Hon. Stanley Melbourne Bruce, C.H., P.C., M.C. (from 8/5/'28).

(c) BRUCE-PAGE GOVERNMENT, from 9th February, 1923—*continued.*

DEPARTMENTS.	MINISTERS.
Minister for Home and Territories	Rt. Hon. SIR GEORGE FOSTER PEARCE, K.C.V.O., P.C. (to 18/6/'26. Major-General Hon. SIR THOMAS WILLIAM GLASGOW, K.C.B., C.M.G., D.S.O., V.D. (from 18/6/'26 to 2/4/'27). Major Hon. CHARLES WILLIAM CLANAN MARR, D.S.O., M.C., V.D. (from 2/4/'27 to 24/2/'28). Major-General Hon. SIR NEVILLE REGINALD HOWSE, V.C., K.C.B., K.C.M.G. (from 24/2/'28).(c)
Minister for Defence	Hon. ERIC KENDALL BOWDEN (to 16/1/'25). Major-General Hon. SIR NEVILLE REGINALD HOWSE, V.C., K.C.B. K.C.M.G. (from 16/1/'25 to 2/4/'27).(e) Major-General Hon. SIR THOMAS WILLIAM GLASGOW, K.C.B., C.M.G., D.S.O., V.D. (from 2/4/'27).
Minister for Works and Railways	Hon. PERCY GERALD STEWART (to 5/8/'24). Hon. WILLIAM CALDWELL HILL (from [illegible]/8/'24).
Minister for Markets(f) ..	Hon. SIR REGINALD VICTOR WILSON, K.B.E. (from 16/1/'25 to 18/6/'26). Hon. THOMAS PATERSON (from 18/6/'26).
Minister for Health	Hon. SIR AUSTIN CHAPMAN, K.C.M.G. (to 26/5/'24). Hon. SIR LITTLETON ERNEST GROOM, K.C.M.G., K.C. (from 29/5/'24 to 13/6/'24). Hon. HERBERT EDWARD PRATTEN (from 13/6/'24 to 16/1/'25). Major-General Hon. SIR NEVILLE REGINALD HOWSE, V.C., K.C.B., K.C.M.G. (from 16/1/'25 to 2/4/'27 and from 24/2/'28). Rt. Hon. STANLEY MELBOURNE BRUCE, C.H., P.C., M.C. (from 2/4/'27 to 24/2/'28).
Honorary Ministers	Hon. SIR REGINALD VICTOR WILSON, K.B.E. (to 16/1/'25). Hon. THOMAS WILLIAM CRAWFORD (from 14/2/'23). Major Hon. CHARLES WILLIAM CLANAN MARR, D.S.O., M.C., V.D. (from 16/1/'25 to 2/4/'27 and from 24/2/'28). Hon. ALEXANDER JOHN MCLACHLAN (from 29/8/'26).

(a) Also Minister for Health (2/4/'27 to 24/2/'28) and Minister for Trade and Customs from 8/5/'28 (b) Also Minister for Trade and Customs and Minister for Health from 29/5/'24 to 13/6/'24. (c) Also Minister for Health. (d) Also Minister for Health from 13/6/'24 to 16/1/'25. (e) Also Minister for Health from 16/1/'25 to 2/4/'27 and from 24/2/'28. (f) Prior to 19/1/'28 Department was "Markets and Migration."

3. State Ministries.—The names of the members of the Ministries in each State in May, 1928, are shown in the following statement. The date on which each Ministry was sworn in is stated in parentheses :—

STATE MINISTRIES, 1928.

NEW SOUTH WALES (18th October, 1927).

Premier and Colonial Treasurer—
HON. T. R. BAVIN, K.C.

Minister for Public Works and Minister for Railways—
HON. E. A. BUTTENSHAW.

Attorney-General and Vice-President of the Executive Council—
HON. F. S. BOYCE.

Minister for Lands—
HON. R. T. BALL.

Minister for Agriculture—
HON. H. V. C. THORBY.

Minister for Education—
HON. D. H. DRUMMOND.

Minister for Local Government—
HON. M. F. BRUXNER, D.S.O.

Minister for Mines and Minister for Forests—
HON. F. A. CHAFFEY.

Minister for Justice—
HON. J. R. LEE.

Minister for Labour and Industry—
HON. E. H. FARRAR, M.L.C.

Minister for Public Health—
HON. R. ARTHUR, M.D.

Assistant Colonial Treasurer—
HON. B. S. B. STEVENS.

Colonial Secretary—
HON. A. BRUNTNELL.

Honorary Minister—
HON. J. RYAN, M.L.C.

VICTORIA (20th May, 1927). (Labour).

Premier, Treasurer, and Minister of Markets—
HON. E. J. HOGAN.

Minister of Railways and Minister in Charge of Electrical Undertakings—
HON. T. TUNNECLIFFE.

Minister of Public Instruction and Minister of Labour—
HON. J. LEMMON.

Commissioner of Crown Lands and Survey, and Minister of Water Supply—
HON. H. S. BAILEY.

Chief Secretary—
HON. G. M. PRENDERGAST.

Attorney-General, Solicitor-General, and Minister for Agriculture—
HON. W. SLATER.

Commissioner of Public Works, Minister of Mines, and Minister in charge of Immigration—
HON. J. P. JONES, M.L.C.

Minister of Forests and Minister of Public Health
HON. W. J. BECKETT, M.L.C.

Ministers without Portfolio—
HON. J. H. DISNEY, M.L.C.
HON. R. WILLIAMS, M.L.C.
HON. J. CAIN.
HON. G. C. WEBBER.

QUEENSLAND (22nd October, 1925). (Labour.)

Premier, Vice-President of the Executive Council, Chief Secretary, and Treasurer—
HON. W. MCCORMACK.

Secretary for Agriculture and Stock—
HON. W. F. SMITH.

Secretary for Mines—
HON. A. J. JONES.

Attorney-General—
HON. J. MULLAN.

Secretary for Railways—
HON. J. LARCOMBE.

Home Secretary—
HON. J. STOPFORD.

Secretary for Public Works—
HON. M. J. KIRWAN.

Secretary for Public Instruction—
HON. T. WILSON.

Secretary for Public Lands—
HON. T. DUNSTAN.

Secretary for Labour—
HON. D. A. GLEDSON.

SOUTH AUSTRALIA (8th April, 1927).

Premier, Treasurer, and Minister of Railways—
HON. R. L. BUTLER.

Chief Secretary and Minister of Mines and of Marine—
HON. H. TASSIE, M.L.C.

Attorney-General and Minister of Industry—
HON. H. HOMBURG.

Commissioner of Crown Lands and Minister of Local Government—
HON. G. F. JENKINS.

Commissioner of Public Works and Minister of Education—
HON. M. MCINTOSH.

Minister of Agriculture, of Immigration, of Repatriation, and of Irrigation—
HON. J. COWAN, M.L.C.

WESTERN AUSTRALIA (17th April, 1924). (Labour).

Premier, Treasurer, and Minister for Forests—
HON. P. COLLIER.

Minister for Railways, Justice, and Police—
HON. J. C. WILLCOCK.

Minister for Public Works, Metropolitan Water Supply, Labour, and State Trading Concerns—
HON. A. MCCALLUM.

Minister for Lands and Immigration—
HON. M. F. TROY.

Chief Secretary and Minister for Education—
HON. J. M. DREW, M.L.C.

Minister for Mines, and Health—
HON. S. W. MUNSIE.

Minister for Agriculture and Industries—
HON. H. MILLINGTON.

Minister for Goldfields and Agricultural Water Supply—
HON. J. CUNNINGHAM.

Minister without Portfolio—
HON. J. W. HICKEY, M.L.C.

TASMANIA (15th June, 1928).

Premier, Treasurer, and Minister Controlling Hydro-Electric Department—
HON. J. C. MCPHEE.

Chief Secretary and Minister for Railways and Mines—
HON. C. E. W. JAMES.

Attorney-General and Minister for Education—
HON. H. S. BAKER.

Minister for Lands, Works, Forestry, and Agriculture—
HON. SIR W. H. LEE, K.C.M.G.

Ministers without Portfolio—
HON. A. L. WARDLAW, M.L.C.
HON. C. W. GRANT.
HON. E. HOBBS.

4. **The Course of Legislation.**—The actual legislation by the Commonwealth Parliament up to the end of the 1927 session is indicated in alphabetical order in "Vol. XXV. of the Acts of the Parliament of the Commonwealth of Australia, passed during the year 1927, with Tables, Appendix, and Indexes." A "Chronological Table of Acts passed from 1907 to 1926, showing how they are affected by subsequent legislation or lapse of time" is also given, and further "A Table of Commonwealth Legislation," for the same

period, "in relation to the several provisions of the Constitution," is furnished. Reference should be made to these for complete information. The nature of Commonwealth legislation up to December, 1927, and its relation to the several provisions of the Constitution, are set forth in the following tabular statement, from which have been omitted Acts repealed or no longer in force :—

COMMONWEALTH LEGISLATION—ANALYTIC TABLE.[*]

Section of Constitution.	Short Title of Commonwealth Act.
	AMENDMENT OF THE CONSTITUTION.
	Constitution Alteration (Senate Elections) 1906.
	Constitution Alteration (State Debts) 1909.
	PARLIAMENTARY AND ELECTORAL LAW.
8—30	Parliamentary Franchise—
	Commonwealth Electoral Act 1918–1925.
9—34	Elections—
	Commonwealth Electoral Act 1902–1911.[†]
	Commonwealth Electoral Act 1918–1925.
	Senate Elections Act 1903–1922.
24	Determination of Number of Members of House of Representatives—
	Representation Act 1905.
	Northern Territory Representation Act 1922–1925.
47	Disputed Elections and Qualifications—
	Commonwealth Electoral Act 1918-1925 (ss. 183–201).
48	Allowances to Members—
	Parliamentary Allowances Act 1920.
	Northern Territory Representation Act 1922–1925 (s. 6).
49	Privileges of Parliament—
	Parliamentary Papers Act 1908.
	GENERAL LEGISLATION.
51 (i)	Trade and Commerce—External and Interstate—
	Australian Industries Preservation Act 1906–1910 [*Trusts and Dumping*].
	Canned Fruits Export Control Act 1926.
	Commerce (Trade Descriptions) Act 1905–1926.
	Commonwealth Shipping Act 1923.
	Customs Act 1901–1925.
	Dairy Produce Export Control Act 1924.
	Dried Fruits Export Control Act 1924.
	Enemy Contracts Annulment Act 1915.
	Export Guarantee Act 1924–1925.
	Fresh Fruits Overseas Marketing Act 1927.
	Immigration Act 1901–1925 (ss. 8AA, 8AB).
	Inter-state Commission Act 1912.
	Meat Industry Encouragement Act 1924.
	Navigation Act 1912–1926.
	Norfolk Island Act 1913 (s. 15).
	Northern Australia Act 1926 (ss. 53, 57).
	Northern Territory Acceptance Act 1910–1919 (s. 13).
	Pearl-shell Overseas Marketing Act 1927.
	River Murray Waters Act 1915–1923.
	Sea-Carriage of Goods Act 1924 [*Bills of Lading*].
	Seamen's Compensation Act 1911.
	Secret Commissions Act 1905.
	Spirits Act 1906–1923.
	Trading with the Enemy Act 1914–1921.
	War Precautions Act Repeal Act 1920–1923.

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[*] This table has been prepared by Sir Robert Garran, Solicitor-General of the Commonwealth.

[†] With the exception of s. 210 of the *Commonwealth Electoral Act* 1902, and s. 18 of the *Commonwealth Electoral Act* 1905, the *Commonwealth Electoral Act* 1902–1911 has been repealed by the *Commonwealth Electoral Act* 1918. See *Commonwealth Gazette*, 25th November, 1918, p. 2257, 21st March, 1919, p. 401, and 14th November, 1920, p. 2277.

COMMONWEALTH LEGISLATION—ANALYTIC TABLE—*continued.*

Section of Constitution.	Short Title of Commonwealth Act.
	GENERAL LEGISLATION—*continued.*
51 (ii)	TAXATION—
	Machinery Acts—
	Beer Excise Act 1901–1923.
	Customs Act 1901–1925.
	Distillation Act 1901–1925.
	Entertainment Tax Assessment Act 1916–1924.
	Estate Duty Assessment Act 1914–1922.
	Excise Act 1901–1923.
	Excise Procedure Act 1907.
	Income Tax Assessment Act 1922–1927.
	Income Tax Assessment (Bonus Shares) Act 1926.
	Income Tax Assessment (Live Stock) Act 1924.
	Income Tax Collection Act 1923–1924.
	Land Tax Assessment Act 1910–1927.
	New Zealand Re-exports Act 1924.
	Spirits Act 1906–1923.
	Taxation of Loans Act 1923.
	War-time Profits Tax Assessment Act 1917–1918.
	War Time Profits Tax Assessment Act 1924–1926.
	Taxing Acts—
	Customs Tariff 1902 [*Section 5 and Schedule repealed by Customs Tariff* 1908].
	Customs Tariff 1921–1926.
	Customs Tariff (Industries Preservation) Act 1921–1922.
	Customs Tariff (New Zealand Preference) 1922–1926.
	Customs Tariff (New Zealand Preference) 1922 (No. 2).
	Customs Tariff (Papua and New Guinea Preference) 1926.
	Customs Tariff (South African Preference) 1906; affected by *Customs Tariff* 1908 (s. 9)* and by *Customs Tariff* 1921–1924 (s. 15).
	Customs Tariff (Sugar) 1922.
	Customs Tariff Validation Acts 1917 and 1919; affected by *Customs Tariff* 1921 (s. 12 (2)).
	Customs Tariff Validation Act 1925.
	Dairy Produce Export Charges Act 1924.
	Dried Fruits Export Charges Act 1924–1927.
	Entertainments Tax Act 1916–1925.
	Estate Duty Act 1914.
	Excise Tariff 1902; amended by Sugar Rebate Abolition Act 1903, *Excise Tariff* 1905*, *Excise Tariff (Amendment)* 1906*, *Excise Tariff* 1908*, and *Excise (Sugar)* 1910.*
	Excise Tariff 1921–1926.
	Fresh Fruits Export Charges Act 1927.
	Income Tax Acts 1915, 1916, 1917, 1918, 1919, 1920, 1921, 1922, 1923, 1924, 1925, 1926, 1927.
	Land Tax Act 1910–1927.
	Pearl-shell Export Charges Act 1927.
	War-time Profits Tax Act 1917.
(iii)	BOUNTIES ON PRODUCTION OR EXPORT—
	Cotton Bounty Act 1926.
	Iron and Steel Products Bounty Act 1922–1927.
	Papua and New Guinea Bounties Act 1926.
	Power Alcohol Bounty Act 1926.
	Shale Oil Bounty Act 1917–1926.
	Sulphur Bounty Act 1923.
	Wine Export Bounty Act 1924–1927.

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* Acts whose short titles are printed in italics with a * have been repealed or have expired.

COMMONWEALTH LEGISLATION—ANALYTIC TABLE—*continued.*

Section of Constitution.	Short Title of Commonwealth Act.
	GENERAL LEGISLATION—*continued.*
51 (iv)	BORROWING MONEY ON THE PUBLIC CREDIT OF THE COMMONWEALTH—
	Audit Act 1901–1926 (ss. 55–59).
	Commonwealth Bank Act 1911–1927 (ss. 10, 53–58, 60ABE–60ABG).
	Commonwealth Housing Act 1927 (s. 10).
	Commonwealth Inscribed Stock Act 1911–1927.
	Development and Migration Act 1926 (s. 12).
	Funding Arrangements Act 1921.
	Grafton to South Brisbane Railway Act 1924.
	Immigration Loan Act 1922.
	Loan Act 1911–1914; 1912–1914; 1913–1914; 1914; (No. 2) 1914–1915; 1918; 1919; 1920; 1921; (No. 2) 1921; 1922; 1923; (No. 1) 1924; (No. 2) 1924; (No. 3) 1924; (No. 1) 1925; (No. 2) 1925; (No. 1) 1926; (No. 1, 1927); (No. 2) 1927.
	Loans Redemption and Conversion Act 1921.
	Loans Securities Act 1919.
	National Debt Sinking Fund Act 1923–1925.
	Northern Australia Act 1926 (s. 31).
	Oil Agreement Act 1924.
	Oil Agreement Act 1926 (s. 3).
	Repatriation Loan Act 1921.
	Seat of Government (Administration) Act 1924–1926 (s. 20).
	States Loan Act 1916; 1917; 1924; 1925; 1926; 1927.
	Sugar Purchase Act 1915–1920.
	Tasmanian Loan Redemption Act 1919.
	Taxation of Loans Act 1923.
	Treasury Bills Act 1914–1915.
	War Gratuity Acts 1920 (ss. 11, 13).
	War Loan Act (No. 1) 1915; (No. 3) 1915; (No. 1) 1916; 1917; 1918; 1920.
	War Loan (United Kingdom) Act 1914–1917; 1915–1917; (No. 2) 1916.
	War Loan Securities Repurchase Act 1918.
(v)	POSTAL, TELEGRAPHIC, AND TELEPHONIC SERVICES—
	Commonwealth Electoral Act 1918–1925 (ss. 212, 213).
	Pacific Cable Act 1911.
	Post and Telegraph Act 1901–1923.
	Post and Telegraph Rates Act 1902–1924.
	Purchase Telephone Lines Acquisition Act 1911.
	Telegraph Act 1909.
	Wireless Agreement Act 1924; 1927.
	Wireless Telegraphy Act 1905–1919.
(vi)	NAVAL AND MILITARY DEFENCE—
	General—
	Air Force Act 1923.
	Control of Naval Waters Act 1918.
	Deceased Soldiers' Estates Act 1918–1919.
	Defence Act 1903–1927.
	Defence Equipment Act 1924.
	Defence Lands Purchase Act 1913.
	Defence Retirement Act 1922.
	Naval Agreement Act 1903–1912.
	Naval Defence Act 1910–1918.
	Telegraph Act 1909.
	War Legislation—
	Australian Imperial Force Canteens Fund Act 1920.
	Australian Soldiers' Repatriation Act 1920–1922.
	Australian War Memorial Act 1925.
	Enemy Contracts Annulment Act 1915.

COMMONWEALTH LEGISLATION—ANALYTIC TABLE—*continued.*

Section of Constitution.	Short Title of Commonwealth Act.
	GENERAL LEGISLATION—*continued.*
	Naval and Military Defence—*continued.*
	War Legislation—continued.
	Legal Proceedings Control Act 1919.
51 (vi)	Moratorium Act 1919.
	Termination of the Present War (Definition) Act 1919.
	Trading with the Enemy Act 1914–1921.
	Treaties of Peace (Austria and Bulgaria) Act 1920.
	Treaties of Washington Act 1922.
	Treaty of Peace (Germany) Act 1919–1920.
	Treaty of Peace (Hungary) Act 1921.
	War Gratuity Acts 1920.
	War Precautions Act Repeal Act 1920–1923.
	War Service Homes Act 1918–1927.
	War Service Homes Agreement Act 1927.
	War Service Homes Commission Validating Act 1921.
	Wheat Storage Act 1917.
(vii)	Lighthouses, Lightships, Beacons and Buoys—
	Lighthouses Act 1911–1919.
(viii)	Astronomical and Meteorological Observations—
	Meteorology Act 1906.
(ix)	Quarantine—
	Quarantine Act 1908–1924.
(xi)	Census and Statistics—
	Census and Statistics Act 1905–1920.
	Statistical Bureau (Tasmania) Act 1924.
(xii)	Currency, Coinage, and Legal Tender—
	Coinage Act 1909.
	Commonwealth Bank Act 1911–1927 (ss. 60A–60AB).
(xiii)	Banking, other than State Banking, Etc.—
	Commonwealth Bank Act 1911–1927.
	Commonwealth Housing Act 1927.
(xiv)	Insurance—
	Life Assurance Companies Act 1905.
	Marine Insurance Act 1909.
(xvi)	Bills of Exchange and Promissory Notes—
	Bills of Exchange Act 1909–1912.
	Commonwealth Bank Act 1911–1927 (s. 29 (*a*)).
(xvii)	Bankruptcy and Insolvency—
	Bankruptcy Act 1924–1927.
(xviii)	Copyright, Patents, Designs and Trade Marks—
	Boy Scouts Association Act 1924 (s. 3).
	Copyright Act 1912.
	Customs Act 1901–1925 (s. 52 (*a*), 57).
	Designs Act 1906–1912.
	Patents Act 1903–1921.
	Patents, Trade Marks, and Designs Act 1910.
	Trade Marks Act 1905–1922.
(xix)	Naturalization and Aliens—
	Aliens Registration Act 1920.
	Aliens Registration Act Suspension Act 1926.
	Immigration Act 1901–1925.
	Maternity Allowance Act 1912–1927 (s. 6).
	Nationality Act 1920–1925.
	War Precautions Act Repeal Act 1920–1923 (s. 8).
(xx)	Corporations—
	Boy Scouts Association Act 1924.
(xxiii)	Invalid and Old-age Pensions—
	Invalid and Old-age Pensions Act 1908–1926.

COMMONWEALTH LEGISLATION—ANALYTIC TABLE—*continued.*

Section of Constitution.	Short Title of Commonwealth Act.
	GENERAL LEGISLATION—*continued.*
51 (xxiv)	SERVICE AND EXECUTION THROUGHOUT COMMONWEALTH OF PROCESS AND JUDGMENTS OF STATE COURTS—
	Service and Execution of Process Act 1901–1924.
(xxv)	RECOGNITION OF STATE LAWS, RECORDS, ETC.—
	State Laws and Records Recognition Act 1901.
(xxvi)	PEOPLE OF ANY RACE, OTHER THAN ABORIGINAL—SPECIAL LAWS—
	Commonwealth Electoral Act 1918–1925 (s. 39).
	Invalid and Old-age Pensions Act 1908–1926 (ss. 16, 21).
	Pacific Island Labourers Act 1901–1906.
	Post and Telegraph Act 1901–1923 (s. 16).
(xxvii)	IMMIGRATION AND EMIGRATION—
	Contract Immigrants Act 1905.
	Development and Migration Act 1926.
	Emigration Act 1910.
	Immigration Act 1901–1925.
	Pacific Island Labourers Act 1901–1906.
	Passports Act 1920.
	War Precautions Act Repeal Act 1920–1923 (s. 9).
(xxviii)	INFLUX OF CRIMINALS—
	Immigration Act 1901–1925 (s. 3 (*ga*), (*gb*)).
(xxix)	EXTERNAL AFFAIRS—
	Extradition Act 1903.
	High Commissioner Act 1909.
	Nauru Island Agreement Act 1919.
	Treaties of Washington Act 1922.
(xxx)	RELATIONS WITH PACIFIC ISLANDS—
	Pacific Island Labourers Act 1901–1906.
	Nauru Island Agreement Act 1919.
	New Guinea Act 1920–1926.
(xxxi)	ACQUISITION OF PROPERTY FOR PUBLIC PURPOSES—
	Commonwealth Railways Act 1917–1925 (s. 63).
	Defence Lands Purchase Act 1913.
	Kalgoorlie to Port Augusta Railway Lands Act 1918–1920.
	Lands Acquisition Act 1906–1916; 1912.
	Lands Acquisition (Defence) Act 1918.
	Lighthouses Act 1911–1919 (ss. 5, 6).
	Naval Properties Transfer Act 1925.
	Northern Australia Act 1926 (ss 32, 55).
	Northern Territory Railway Extension Act 1923.
	Oodnadatta to Alice Springs Railway Act 1926 (s. 9).
	Purchase Telephone Lines Acquisition Act 1911.
	Seat of Government Act 1908.
	Seat of Government Acceptance Act 1909; 1922.
	Seat of Government (Administration) Act 1910 (s. 10).
	War Service Homes Act 1918–1927 (s. 16).
(xxxii)	CONTROL OF RAILWAYS FOR DEFENCE PURPOSES—
	Defence Act 1903–1927 (ss. 64–66, 80, 124 (*r*)).
(xxxiv)	RAILWAY CONSTRUCTION AND EXTENSION IN ANY STATE WITH THE CONSENT OF THAT STATE—
	Commonwealth Railways Act 1917–1925.
	Grafton to South Brisbane Railway Act 1924.
	Kalgoorlie to Port Augusta Railway Act 1911–1912.
	Kalgoorlie to Port Augusta Railway Lands Act 1918–1920.
	Northern Australia Act 1926.
	Northern Territory Railway Extension Act 1923.

COMMONWEALTH LEGISLATION—ANALYTIC TABLE—*continued.*

Section of Constitution.	Short Title of Commonwealth Act.
	GENERAL LEGISLATION—*continued.*
51 (xxxv)	Conciliation and Arbitration for the Prevention and Settlement of Industrial Disputes extending beyond the Limits of any one State—
	Arbitration (Public Service) Act 1920.
	Commonwealth Conciliation and Arbitration Act 1904–1927
	Industrial Peace Acts 1920.
(xxxix)	Matters Incidental to the Execution of Powers—
	Acts Interpretation Act 1901–1918.
	Acts Interpretation Act 1904–1916.
	Advances to Settlers Act 1923.
	Agreements Validation Act 1923.
	Air Navigation Act 1920.
	Amendments Incorporation Act 1905–1918.
	Appropriation and Supply Acts.
	Arbitration (Public Service) Act 1920.
	Canned Fruits Export Charges Act 1926.
	Canned Fruits Export Control Act 1926.
	Committee of Public Accounts Act 1913–1920.
	Commonwealth Inscribed Stock Act 1911–1927.
	Commonwealth Public Service Act 1922–1924.
	Commonwealth Public Works Committee Act 1913-1921.
	Commonwealth Salaries Act 1907.
	Commonwealth Shipping Act 1923.
	Commonwealth Workmen's Compensation Act 1912.
	Crimes Act 1914–1926.
	Dairy Produce Export Control Act 1924.
	Defence Retirement Act 1922.
	Development and Migration Act 1926.
	Dried Fruits Advances Act 1924–1926.
	Dried Fruits Export Control Act 1924.
	Evidence Act 1905.
	Export Guarantee Act 1924–1925.
	Fresh Fruits Overseas Marketing Act 1927.
	Hop Pool Agreement Act 1924.
	Income Tax Collection Act 1923–1924.
	Jury Exemption Act 1905–1922.
	Main Roads Development Act 1923–1925.
	Maternity Allowance Act 1912–1927.
	Meat Industry Encouragement Act 1924.
	Oil Agreement Act 1920; 1924; 1926.
	Peace Officers Act 1925.
	Pearl-shell Overseas Marketing Act 1927.
	Petroleum Prospecting Act 1926–1927.
	Precious Metals Prospecting Act 1926.
	Returned Soldiers' Woollen Company Loan Act 1921.
	Royal Commissions Act 1902–1912.
	Rules Publication Act 1903-1916.
	Science and Industry Endowment Act 1926.
	Science and Industry Research Act 1920–1926.
	Solicitor-General Act 1916.
	South Australian Farmers' Agreement Act 1922.
	Statutory Declarations Act 1911–1922.
	Superannuation Act 1922–1924.
	Treaties of Washington Act 1922.
	War Precautions Act Repeal Act 1920–1923.
	Westralian Farmers' Agreement Act 1920; 1921.
	Wire and Wire Netting Act 1927.
	Zoological Museum Agreement Act 1924.

COMMONWEALTH LEGISLATION—ANALYTIC TABLE—*continued.*

Section of Constitution.	Short Title of Commonwealth Act.
	EXECUTIVE GOVERNMENT.
65	NUMBER OF MINISTERS—
	Ministers of State Act 1917.
67	APPOINTMENT AND REMOVAL OF OFFICERS—
	Australian Soldiers Repatriation Act 1920–1922 (ss. 7–21).
	Commonwealth Bank Act 1911–1927 (ss. 12, 16, 35F, 35P).
	Commonwealth Public Service Act 1922–1924 (ss. 37–49).
	Commonwealth Railways Act 1917–1925 (ss. 5–15, 46–54).
	Commonwealth Shipping Act 1923 (ss. 6, 11).
	Defence Act 1903–1927 (s. 63).
	Development and Migration Act 1926.
	High Commissioner Act 1909 (ss. 8, 9).
	National Debt Sinking Fund Act 1923–1925 (s. 6).
	New Guinea Act 1920–1926 (ss. 6–12).
	Norfolk Island Act 1913 (ss. 7, 9).
	Northern Australia Act 1926.
	Papua Act 1905–1924 (s. 19).
	Peace Officers Act 1925.
	Science and Industry Research Act, 1920–1926.
	Seat of Government (Administration) Act 1924–1926 (ss. 6, 13).
	Solicitor-General Act 1916.
	Superannuation Act 1922–1924 (ss. 61–64).
	Tariff Board Act 1921–1924 (ss. 5–9).
	Trading with the Enemy Act 1914–1921 (s. 2A).
	War Service Homes Act 1918–1927 (ss. 5–15).
	War Service Homes Commissioner Validating Act 1921.
	THE JUDICATURE.
71–80	CONSTITUTION AND PROCEDURE OF THE HIGH COURT—
	High Court Procedure Act 1903–1925.
	Judiciary Act 1903–1927.
73	APPELLATE JURISDICTION OF THE HIGH COURT—
	Bankruptcy Act 1924–1927 (s. 26).
	Estate Duty Assessment Act 1914–1922 (s. 28).
	Income Tax Assessment Act 1922–1927 (s. 51, 53).
	Judiciary Act 1903–1927.
	Land Tax Assessment Act 1910–1927 (s. 44M).
	Norfolk Island Act 1913 (s. 11).
	Papua Act 1905–1924 (s. 43).
	War-time Profits Tax Assessment Act 1917–1918 (s. 29).
76	ORIGINAL JURISDICTION OF THE HIGH COURT—
	(1) *In matters arising under the Constitution or involving its interpretation—*
	Judiciary Act 1903–1927 (ss. 23, 30A, 88).
	(2) *In matters arising under Laws made by the Parliament—*
	Australian Industries Preservation Act 1906–1910 (ss. 10, 11, 13, 21, 22, and 26).
	Bankruptcy Act 1924–1927 (s. 20 (3)).
	Commonwealth Conciliation and Arbitration Act 1904–1927 (ss. 21AA, 31).
	Commonwealth Electoral Act 1918–1925 (ss. 183, 202).
	Copyright Act 1912 (s. 37 (2)).
	Customs Act 1901–1925 (ss. 221, 227, 245).
	Defence Act 1903–1927 (s. 91).
	Designs Act 1906–1912 (s. 39 (3)).
	Estate Duty Assessment Act 1914–1922 (ss. 39–41).
	Excise Act 1901–1923 (ss. 109, 115, 134).
	Income Tax Assessment Act 1922–1927 (ss. 50–53).
	Industrial Peace Acts 1920.
	Judiciary Act 1903–1927.

COMMONWEALTH LEGISLATION—ANALYTIC TABLE—*continued.*

Section of Constitution.	Short Title of Commonwealth Act.
	THE JUDICATURE—*continued.*
	ORIGINAL JURISDICTION OF THE HIGH COURT—*continued.*
	(2) *In matters arising under Laws made by the Parliament*—continued.
76	Land Tax Assessment Act 1910–1927 (s. 44K–44M).
	Lands Acquisition Act 1906–1916 (ss. 10, 11, 24, 36–39, 45, 46, 50, 54, 56, 59).
	Navigation Act 1912–1926 (ss. 383, 385).
	Patents Act 1903–1921 (ss. 47, 58, 67, 75–77, 84–87A, 111).
	Post and Telegraph Act 1901–1923 (ss. 29, 43).
	Referendum (Constitution Alteration) Act 1906–1926 (ss. 27, 31).
	Trade Marks Act 1905–1922 (ss. 34, 35, 44, 45, 70–72, 95).
	Trading with the Enemy Act 1914–1921 (ss. 9C, 9P).
	War-time Profits Tax Assessment Act 1917–1918 (s. 28).
(iii)	(3) *In matters of Admiralty and Maritime Jurisdiction*—
	Judiciary Act 1903–1927 (ss. 30, 30A).
77 (ii)	EXCLUDING JURISDICTION OF STATE COURTS—
	Judiciary Act 1903–1927 (ss. 38, 38A, 39, 57, 59).
(iii)	INVESTING STATE COURTS WITH FEDERAL JURISDICTION—
	Bankruptcy Act 1924–1927 (ss. 18, 19).
	Commonwealth Conciliation and Arbitration Act 1904–1927 (ss. 44–46, 48).
	Commonwealth Electoral Act 1918–1925 (ss. 58, 184).
	Copyright Act 1912 (ss. 14–17).
	Customs Act 1901–1925 (ss. 221, 227, 245).
	Defence Act 1903–1927 (s. 91).
	Designs Act 1906–1912 (ss. 25, 39).
	Estate Duty Assessment Act 1914–1922 (s. 24).
	Excise Act 1901–1923 (ss. 109, 115, 134).
	Income Tax Assessment Act 1922–1927 (s. 50).
	Judiciary Act 1903–1927 (ss. 17, 39, 68).
	Land Tax Assessment Act 1910–1927 (44K–44M).
	Navigation Act 1912–1926 (ss. 91, 92, 318–320, 380–383, 385, 395).
	Patents Act 1903–1921 (ss. 30, 47, 58, 67, 75–77, 84–87A, 111).
	Post and Telegraph Act 1901–1923 (ss. 29, 43).
	Trade Marks Act 1905–1922 (ss. 34, 35, 44, 45).
	War-time Profits Tax Assessment Act 1917–1918 (s. 28).
78	RIGHT TO PROCEED AGAINST COMMONWEALTH OR STATE—
	Judiciary Act 1903–1927 (ss. 56–67).
	FINANCE.
81	APPROPRIATION OF MONEYS—
	Appropriation and Supply Acts.
	Audit Act 1901–1926 (ss. 36–37, 62A).
	Funding Arrangements Act 1921.
	Loans Redemption and Conversion Act 1921.
83	PAYMENT OF MONEYS—
	Audit Act 1901–1926 (ss. 31–37, 62A).
87	BRADDON CLAUSE—
	Surplus Revenue Act 1910.
	States Grants Act 1927.
93	CREDITING OF REVENUE AND DEBITING OF EXPENDITURE—
	Surplus Revenue Acts 1908, 1909, 1910.
94	DISTRIBUTION OF SURPLUS REVENUE—
	Surplus Revenue Acts 1908, 1909, 1910.
	States Grants Act 1927.
96	ASSISTANCE TO STATES—
	Federal Aid Roads Act 1926.
	Tasmania Grant Act 1922, 1923.
	Western Australia Grant Act 1926.
	States Grants Act 1927.

COMMONWEALTH LEGISLATION—ANALYTIC TABLE—*continued.*

Section of Constitution.	Short Title of Commonwealth Act.
	FINANCE—*continued.*
97	AUDIT OF PUBLIC ACCOUNTS—
	Audit Act 1901–1924.
98	NAVIGATION AND SHIPPING—
	Lighthouses Act 1911–1919.
	Navigation Act 1912–1926.
	River Murray Waters Act 1915–1923.
	Sea-Carriage of Goods Act 1924.
	Seamen's Compensation Act 1911.
100	USE OF WATERS—
	River Murray Waters Act 1915–1923.
101–104	INTER-STATE COMMISSION—
	Inter-state Commission Act 1912.
	THE STATES.
118	RECOGNITION OF STATE LAWS, RECORDS, ETC.—
	State Laws and Records Recognition Act 1901.
119	PROTECTION OF STATES FROM INVASION AND VIOLENCE—
	Defence Act 1903–1927 (s. 51).
	TERRITORIES.
122	GOVERNMENT OF TERRITORIES—
	Defence Act 1903–1927 (s. 49).
	Income Tax Assessment Act 1922–1927 (3, 5).
	Jervis Bay Territory Acceptance Act 1915.
	Judiciary Act 1903–1927 (ss. 11, 30B, 34A, 68 (*g*)).
	Nauru Island Agreement Act 1919.
	New Guinea Act 1920–1926.
	Norfolk Island Act 1913.
	Northern Australia Act 1926.
	Northern Territory Acceptance Act 1910–1919.
	Northern Territory (Administration) Act 1910–1926.
	Northern Territory Railway Extension Act 1923.
	Northern Territory Representation Act 1922–1925.
	Papua Act 1905–1924.
	Papua and New Guinea Bounties Act 1926.
	Patents Act 1903–1921 (s. 4A).
	Pine Creek to Katherine River Railway Act 1913.
	Pine Creek to Katherine River Railway Survey Act 1912.
	Removal of Prisoners (Territories) Act 1923.
	Seat of Government Acceptance Act 1909.
	Seat of Government (Administration) Act 1910 ; 1924–1926.
	Wireless Telegraphy Act 1905–1919 (s. 2).
	MISCELLANEOUS.
125	SEAT OF GOVERNMENT—
	Commonwealth Conciliation and Arbitration Act 1904–1927 (s. 52).
	Judiciary Act 1903–1927 (s. 10).
	Seat of Government Act 1908.
	Seat of Government Acceptance Act 1909 ; 1922.
	Seat of Government (Administration) Act 1910 ; 1924–1926.
128	ALTERATION OF CONSTITUTION—
	Constitution Alteration (Senate Elections) 1906.
	Constitution Alteration (State Debts) 1909.
	Referendum (Constitution Alteration) Act 1906–1926.

5. Legislation During 1927.—(i) *General.* The following summary of the more important legislative enactments of the Commonwealth and State Parliaments during the year 1927 is exclusive of the ordinary Appropriation and Loan Acts.

(ii) COMMONWEALTH.—*Pearl-shell Overseas Marketing.* Regulates the export of Pearl-shell.

Pearl-shell Export Charges. Imposes a charge of £3 per ton of pearl-shell exported.

Wire and Wire Netting. Provides financial assistance to the States and to North and Central Australia for the purpose of supplying Wire and Wire Netting to settlers.

Fresh Fruits Overseas Marketing. Constitutes a Board for the purpose of handling, marketing, storage, shipment, sale, and disposal of fresh fruits.

Fresh Fruit Export Charges. Levies a charge of one penny per case of fresh fruits exported.

War Service Homes Agreement. Ratifies an agreement between Commonwealth Government and State Savings Bank of Victoria in regard to the provision of homes for and of advances to eligible persons.

Commonwealth Housing. Empowers the Commonwealth Savings Bank to advance money to provide houses.

Commonwealth Bank (Savings Bank). Amends the Commonwealth Bank Act in regard to Savings Bank business.

(iii) NEW SOUTH WALES.—*Wheat.* Provides for the grading of wheat in bulk; regulates the handling of such wheat, &c.

Dried Fruits. Constitutes a Dried Fruits Board to control marketing of dried fruit.

Government Insurance (Enabling and Validating). Empowers the Treasurer to carry on Workers' Compensation and certain insurance business.

Parliamentary Electorates and Elections. Provides for a further re-distribution of State into electoral districts.

Marketing of Primary Products. Appoints Marketing Board.

Family Endowment. Provides for a Family Endowment fund for the benefit of children by means of an endowment payable to mothers.

Finance (Family Endowment). Declares a contribution rate on employers of 3 per cent. on wages paid.

(iv) VICTORIA.—*Electoral (Absent Voters).* Permits electors to vote at any polling place in the State.

Poisons. Restricts the sale of poisons and methylated spirits.

State Savings Bank. Ratifies the agreement between Commonwealth Government and State of Victoria in respect of housing.

Apprenticeship. Creates a Commission to control matters relating to Apprenticeship.

Commonwealth and States Financial Agreement. Ratifies the agreement between Commonwealth and Victoria concerning the adjustment of financial relations.

Motor Omnibus (Urban and Country). Provides for the Licensing of Motor Omnibuses in urban districts, and the establishment of Road Fund.

Postponement of Payments Act. Suspends payments by certain persons affected by drought or frost conditions in prescribed parts of Victoria.

Highways and Vehicles. Prescribes amended fees payable in respect of Motor Vehicle Registration and restricts weight and lading of vehicles.

(v) QUEENSLAND.—*Commonwealth and States Financial Agreement.* Ratifies the agreement between Commonwealth and Queensland concerning the adjustment of financial relations.

Lands Act Amendment. Provides relief for settlers affected by drought conditions and encouragement pastoral development.

Wire and Wire Netting. Ratifies the agreement with Commonwealth relative to the supply of Wire and Wire Netting to settlers.

(vi) SOUTH AUSTRALIA.—*Taxation Act.* Consolidates Income and Land Tax Acts.

Loans to Producers Act Provides for loans to encourage rural production and land settlement.

Juries. Juries Act 1917 is repealed and other provisions enacted in lieu thereof.

Motor Transport Control. Appoints Board to control the licensing of motor transport in the metropolitan area.

Frost Relief. Provides for relief to fruitgrowers whose crops were damaged by frost.

Drought Relief. State Bank may assist drought stricken farmers with seed wheat.

Financial Agreement Act. Ratifies financial agreement between Commonwealth and South Australia.

(vii) WESTERN AUSTRALIA.—*Closer Settlement.* Deals with the acquisition and disposal of land for closer settlement.

Hospitals. Amends the act relating to Public Hospitals, and provides for the establishment, maintenance and management of such institutions.

Metropolitan Town Planning Commission. Provides for the establishment of a Metropolitan Town Planning Commission.

(viii) TASMANIA.—*Payment of Members.* Provides for increased allowances to members of Parliament.

Aid to Mining. Consolidates the law relating to assistance to miners and prospectors and creates a mining Trust Fund.

Workers' Compensation. Consolidates and amends legislation relating to compensation paid to workers injured in the course of their employment.

Financial Agreement. Ratifies agreement between Commonwealth and Tasmania in regard to the adjustment of financial relations.

(ix) NORTH AND CENTRAL AUSTRALIA.—*Registration of Deeds and Documents.* Registrar-Generals are appointed and powers and duties prescribed.

Encouragement of Primary Production. Primary Producer's Board constituted with power to make advances to producers.

Crown Lands. The administration of Crown Lands is vested in the Commissioners.

§ 4. Cost of Parliamentary Government.

1. **General.**—The following statement shows the cost of parliamentary government in the Commonwealth and in each State, as well as the cost per head of population, for the year ended the 30th June, 1927. In order to avoid incorrect conclusions as to the cost of the Governor-General's or Governor's establishment, it may be pointed out that a very large part of the expenditure (with the exception of the item "Governor's salary") under the head of Governor-General or Governor represents official services entirely outside the Governor's personal interests, and carried out at the request of the Government.

COST OF PARLIAMENTARY GOVERNMENT, 1926–1927.

Particulars.	C'wlth.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
1. *Governor-General or Governor*—	£	£	£	£	£	£	£	£
Governor's Salary ..	10,000	5,000	5,000	1,754	5,000	4,000	2,750	33,504
Official Secretary's salary ..	650	825	(c)	360	..	350	..	2,185
Clerks, etc.	1,288	380	189	963	..	379	..	4,922
Orderlies	..	347	762		301	313	..	
Other messengers ..	215	101	..	..	949	..	..	1,265
Wages—Housemaids, stewards, gamekeepers, etc. ..	8,297	1,426	1,249	..	687	..	466	12,125
Country residence—								
Gardener	..	298	269	..	223	117	175	1,754
Other wages	..	672					..	
Incidental expenses ..	3,483	901	1,657	..	131	484	..	19,604
Furniture, stores, and stationery	957	254	2,779	2,627	623		671	
Postal, cables, etc. ..	1,162	70	202		55		77	
Travelling expenses and conveyance of officers ..	2,608	27	..				..	
Incidental expenses (country residence)	..	247	568	..	21		..	
Other expenses	2,612	..	3,215	1,805	4,341	2,832	769	15,574
Allowance to Lieut.-Governor	..	..	..	525	..	..	..	525
Total	31,272	10,548	15,890	8,034	12,331	8,475	4,908	91,458
2. *Executive Council*—								
Salaries of officers ..	(a)	573	832	30	..	100	(h)	1,505
Other expenses	(a)	328	55	78	..	3	(h)	494
Total	(a)	901	887	108	..	103	(h)	1,999
3. *Ministry*—								
Salaries of Ministers ..	15,300	23,393	10,000	12,794	7,750	6,098	3,000	78,335
Ministerial functions ..	(b)	713	(b)	..	232	1,690	245	2,880
Special Reports for Cabinet ..	(b)	57	(b)	..	..	..	..	57
Premiers' Conference ..	9	..	..	..	26	80	6	121
Travelling expenses ..	3,398	4,974	..	..	338	..	799	9,509
Total	18,707	29,137	10,000	12,794	8,346	7,868	4,050	90,902
4. *Parliament*—								
A. *Upper House:*								
President and Chairman of Committees	2,000	1,900	1,149	..	797	1,562	850	8,258
Allowance to members ..	35,635	..	6,000	..	6,800	16,700	4,800	69,935
Railway passes	2,062	17,528	(d)9,000	..	1,364	7,635	(d)2,728	40,317
Postage for members ..	900	219	(e)	..	24	125	(b)	1,268
B. *Lower House:*								
Speaker and Chairman of Committees	2,000	2,790	1,855	2,200	1,391	1,600	900	12,736
Allowance to members ..	74,190	67,625	28,484	45,295	15,916	28,329	8,500	268,339
Railway passes	18,835	17,506	(f)	..	3,136	12,726	(f)	52,203
Postage for members ..	2,606	2,644	(e)	1,460	288	375	(b)	7,373
Carried forward ..	138,228	110,212	46,488	48,955	29,716	69,052	17,778	460,429

COST OF PARLIAMENTARY GOVERNMENT—*continued.*

Particulars.	C'wlth.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
	£	£	£	£	£	£	£	£
Brought forward ..	138,228	110,212	46,488	48,955	29,716	69,052	17,778	460,429
4. *Parliament*—continued.								
C. *Both Houses :*								
Standing Committee on Public Works—								
Remuneration of members	1,972	4,469	1,326	..	..	..	414	8,181
Salaries of staff and contingencies	1,973	2,127	1,368	..	..	..	114	5,582
Printing—								
Hansard	10,900	5,935	4,370	3,505	2,449	2,606	..	29,765
Other	13,724	15,752	7,498	2,844	8,648	939	3,944	53,349
Parliamentary reporting staff—								
Salaries	10,905	7,595	6,430	2,666	5,304	4.120	..	37,020
Contingencies ..	310	..	33	..	223	122	..	688
Library—								
Salaries	5,555	2,589	1,228	1,146	705	100	(i)	11,323
Contingencies	3,536	934	(g)1,462	662	544	275		7,413
Salaries of other officers and staff	22,878	23,958	15,374	5,652	4,586	6.868	2,492	81,808
Travelling expenses of officers and staff	2,159	..	..	..	..	..	..	2,159
Other	3,743	..	..	..	314	..	..	4,057
D. *Miscellaneous*—								
Fuel, light, heat, power, water	2,454	..	636	766	1,113	(b) 2,664	(b) 1,345	41,304
Posts, telegraphs, telephones	814	..	250	322	372			
Furniture, stores, and stationery	3,580	1,530	626	1,176	1,338			
Contingencies	8,435	3,684	357	3,363	..			
Cab fares—Late sittings, etc.	..	95	(b)	..	69			
Other	..	..	1,501	1,300	3,514			
Total	231,166	178,880	88,947	72,357	58,895	86,746	26,087	743,078
Electoral—								
Salaries	79,503	2,526	1,267	3,765	4,229	2,323	(h)	93,613
Cost of elections, contingencies, etc.	158,259	23,092	31,693	11,895	8,963	9,463	1,656	245,021
Total	237,762	25,618	32,960	15,660	13,192	11,786	1,656	338,634
6. *Royal Commissions, Select Committees, etc.*, including fees and other expenses of Commissioners, fees of counsel, costs incurred by Ministers, cost of overtime worked by departments preparing information, bonuses, etc.	11,507	3,660	132	934	13,939	405	557	31,134
Total	11,507	3,660	132	934	13,939	405	557	31,134
GRAND TOTAL ..	530,414	248,744	148,816	109,887	106,703	115,383	37,258	1,297,205
Cost per head of population ..	1s. 9d.	2s. 1d.	1s. 9d.	2s. 6d.	3s. 9d.	6s. 1d.	3s. 6d.	4s. 3d.

(*a*) Included under Governor-General. (*b*) Not available separately. (*c*) Included under Executive Council. (*d*) Both Houses. (*e*) Included under Library. (*f*) Included under Upper House. (*g*) Including members' postage. (*h*) Duties performed by Chief Secretary's Department. (*i*) Included under Miscellaneous.

Figures showing total cost and cost per head during each of the last five years are given in the next table.

COST OF PARLIAMENTARY GOVERNMENT, 1922–23 TO 1926–27.

TOTAL.

Year.	C'wlth.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
	£	£	£	£	£	£	£	£
1922–23 ..	479,658	212,056	109,137	109,020	72,417	75,360	37,084	1,094,732
1923–24 ..	367,479	204,817	128,143	89,101	83,031	82,410	35,629	990,610
1924–25 ..	401,021	288,331	115,626	83,408	81,409	92,338	37,478	1,105,611
1925–26 ..	511,474	229,246	121,415	107,166	94,130	103,371	40,240	1,207,042
1926–27 ..	530,414	248,744	148,816	109,887	106,703	115,353	37,258	1,297,265

PER HEAD OF POPULATION.

Year.	C'wlth.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
1922–23 ..	1 8	1 11	1 5	2 9	2 10	4 5	3 4	3 11
1923–24 ..	1 3	1 10	1 7	2 2	3 2	4 8	3 3	3 5
1924–25 ..	1 4	2 7	1 7	2 1	3 0	5 1	3 5	3 9
1925–26 ..	1 8	1 11	1 5	2 5	3 4	5 5	3 9	3 11
1926–27 ..	1 9	2 1	1 9	2 6	3 9	6 1	3 6	4 3

§ 5. Strength of the Civil Service.

The strength of the permanent Civil Service at a definite point of time is not available, as the dates to which annual records are made up vary in different State Departments. The following table excludes temporary (except railways and Government tramways) and part-time officers (registrars of births and deaths, postal contractors, etc.); naval, air, and military employees; and certain others, such as those employed in State trading undertakings:—

CIVIL SERVICE—NUMBER OF PERMANENT OFFICERS, 1926–27.

State, etc.	Railways and Tramways (*a*).		Police.		Teachers.		Other Departments.		Total Persons
	M.	F.	M.	F.	M.	F.	M.	F.	
Commonwealth ..	(*b*) 2,209		..	..	..	..	24,704	3,501	30,414
New South Wales ..	58,909		2,966	8	4,689	6,624	6,957	858	81,011
Victoria	35,193		1,959	4	3,081	5,490	3,297	812	49,836
Queensland	22,769		1,167	1	1,806	2,298	4,770	1,352	34,163
South Australia ..	13,228		632	11	1,121	2,075	1,628	183	18,878
Western Australia ..	9,564		532	5	714	1,367	1,364	216	13,762
Tasmania	1,419		244	1	345	941	565	188	3,703
Northern Territory ..	(*c*)		38	..	4	7	(*c*)	(*c*)	49
Australia ..	(*d*)	(*d*)	7,538	30	11,760	18,802	43,285	7,110	
	143,291		7,568		30,562		50,395		231,816

(*a*) Salaried and wages staff; includes temporary employees—Municipal Tramways excluded.
(*b*) Excluding Federal Capital Territory line, officers of which are included with New South Wales.
(*c*) Included with Commonwealth. (*d*) Not available.

§ 6. Consular Representatives of Foreign Countries in Australia.

The following tabular statement shows the number of consular representatives of foreign countries in each State for the year 1928:—

CONSULAR REPRESENTATIVES IN AUSTRALIA, 1928.

Country.	Number of Consular Representatives in—						
	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total Aust.
Argentine Republic	1	1	..	1	..	1	4
Austria	..	1	..	..	..	..	1
Belgium	3	1	1	1	1	1	8
Brazil	2	1	..	..	..	1	4
Chile	1	1	..	1	..	..	3
China	..	2	..	..	..	..	2
Colombia	2	1	..	..	..	..	3
Costa Rica	1	..	..	..	..	..	1
Czecho-Slovakia	1	1	1	..	1	..	4
Denmark	3	2	3	2	1	1	12
Ecuador	2	..	..	..	..	..	2
Estonia	1	..	..	..	..	..	1
Finland	1	1	1	1	1	..	5
France	3	1	1	1	1	1	8
Germany	..	2	..	1	..	..	3
Greece	2	2	1	..	1	..	6
Guatemala	..	1	..	..	..	..	1
Honduras	..	1	..	..	..	..	1
Italy	1	1	2	1	1	1	7
Japan	2	2	..	1	1	..	6
Liberia	1	..	..	1	..	..	2
Netherlands	3	1	5	1	1	1	12
Nicaragua	..	1	..	..	..	..	1
Mexico	..	1	..	..	..	..	1
Norway	3	3	2	3	3	2	16
Panama	1	1	1	..	..	..	3
Paraguay	1	1	..	..	1	..	3
Peru	2	1	..	1	..	..	4
Poland	1	..	1	..	..	..	2
Portugal	1	1	..	..	..	..	2
Roumania	1	..	..	..	..	..	1
Salvador	..	1	..	..	..	..	1
Serb-Croat-Slovene State	1	..	..	..	..	..	1
Siam	1	..	..	..	..	..	1
Spain	2	1	1	1	1	..	6
Sweden	3	1	2	3	2	1	12
Switzerland	1	1	1	..	..	..	3
U.S.A.	5	4	2	1	1	..	13
Uruguay	1	1	..	..	..	..	2
Venezuela	1	..	..	..	..	..	1
Total	55	41	25	21	17	10	169*

* In addition Northern Territory has a Consul for the Netherlands, New Guinea a Consul for Sweden, and Papua a Consul for Italy.

Countries having Consuls-General in Sydney are Belgium, Chile, Czecho-Slovakia, Denmark, Ecuador, France, Greece, Italy, Japan, Netherlands, Paraguay, Poland, Switzerland, and Sweden. Those having Consuls-General in Melbourne are China, Colombia, Germany, Honduras, Norway, Peru, and United States. The Consul in-Chief for Panamà is located at Sydney.

CHAPTER IV.

LOCAL GOVERNMENT.

§ 1. Introduction.

1. **General.**—The construction and maintenance of roads, bridges and ferries are generally part of the functions of local authorities, but in New South Wales and South Australia, more especially in the large unincorporated areas, these duties are undertaken directly by the Government. In some States, moreover, a certain proportion of the roads and bridges is constructed and maintained by the Government, which, in addition advances money for main roads to be expended by municipalities under the supervision of special Boards. Although roads, bridges and ferries constructed and maintained directly by Government do not properly come under the heading of " Local Government," they have been included in this chapter for the sake of convenience.

2. **Municipalities, Shires, etc.**—A description of the various systems of municipal government in the different States, and their development from the earliest date, was published in 1919 by the Commonwealth Bureau of Census and Statistics in a separate work entitled " Local Government in Australia." Limits of space preclude the incorporation of the information contained therein in the Official Year Book.

3. **Water Supply and Sewerage.**—In the cities of Sydney, Melbourne and Brisbane the control of water supply and sewerage is in the hands of special Boards, while in Adelaide and Perth, these services are under the direct supervision of Government Departments. In most of the other cities and towns, the municipal councils, or, in some cases, water trusts, are the controlling bodies which either construct the works out of their own resources or take them over after they have been constructed by the Government.

4. **Harbours.**—The majority of the harbours in Australia are managed by Boards, the members of which are either elected by persons interested or appointed by the Government. In a few instances, however, they are directly controlled by the Government. Only those which are controlled by Boards are dealt with in the following pages.

5. **Fire Brigades.**—In all the States, the management of fire brigades is undertaken by Boards. The members of these Boards are usually elected by the councils of municipalities and insurance companies within the districts placed under their jurisdiction, together with one or more appointed by the Government. Occasionally volunteer or country fire brigades are represented.

§ 2. Government Roads, Bridges, Etc.

1. **New South Wales.**—(i) *General.* The control of all roads, bridges and ferries, with the exception of those proclaimed as " National " and of those in the unincorporated areas of the Western Division, which still remain under its jurisdiction, was transferred, in 1920, from the Public Works Department to local authorities. The Government has also adopted the policy of assisting municipal and shire councils to recondition certain main roads by doing the work in the first instance, and recovering in instalments from the councils concerned one-half of the cost.

(ii) *Roads, Bridges and Ferries.* At the 30th June, 1927, the " National " works consisted of 58 miles of roads, 288 bridges with a total length of 108,295 feet, and 19 ferries, while in the unincorporated areas of the Western Division there were 5,688 miles of roads (of which 177 miles were metalled or ballasted, 220 formed only, and 2,932 cleared only), 96 bridges of a total length of 13,495 feet, 489 culverts, and 6 hand punts under the control of the Public Works Department.

(iii) *Expenditure on Roads, Bridges and Ferries.* The total Government expenditure on roads, bridges and ferries from 1857 to 1926–27 was £28,911,732. The following table shows the expenditure for each year from 1921–22 to 1926–27 :—

ROADS, ETC.—EXPENDITURE BY GOVERNMENT DEPARTMENTS, NEW SOUTH WALES, 1922 TO 1926.

Year.	1921–22.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£	£
Expenditure.. ..	542,205	443,541	458,415	(a)635,976	1,067,442 (b)	1,323,975 (c)

(a) Includes £260,547, Sydney Harbour Bridge. (b) Includes £483,395, Sydney Harbour Bridge. (c) Includes £910,077, Sydney Harbour Bridge.

2. **Victoria.**—(i) *General.* A small sum is expended annually by the State Government on roads and bridges, and a considerable amount of loan money is advanced in each year to the Country Roads Board for the purpose of constructing and maintaining main and developmental roads, the amount so expended during the year ending 30th June, 1926, being £960,452, and in 1926–27, £1,042,441. An annual payment of £50,000 is also made out of Consolidated Revenue to the Board for maintenance works.

(ii) *Direct Expenditure by Government.* The following table shows the amounts of money expended directly by the Government on roads and bridges during the years 1921–22 to 1926–27 :—

ROADS AND BRIDGES—GOVERNMENT EXPENDITURE, VICTORIA, 1921-22 TO 1926-27.

Year.	1921–22.	1922–23.	1923–24.	1924–25.	1925–26.	1926–72.
	£	£	£	£	£	£
Expenditure.. ..	23,622	65,459	46,761	68,939	81,205	193,291

(iii) *Country Roads Board.* The duties of this Board were given in some detail in Year Book No. 15, p. 526.

Loans to the amount of £4,822,000 have been authorized from time to time for permanent works under the Country Roads Acts. One half of the amount expended on permanent works and one-third of the amount expended on maintenance must be refunded by the municipalities affected, 6 per cent. of the amount due in respect of permanent works being payable annually, and the cost of maintenance allocated to each municipality must be paid before the 1st of July in each year. A special rate, not exceeding 6d. in the pound, may be levied in any ward or riding of a municipality for the purpose of such repayment.

All registration fees, licence fees and fines under the Motor Car Act, all licence fees for unused roads and water frontages, and all registration fees and fines for traction-engines are credited to the Country Roads Board Fund. The total loan expenditure for permanent works to the 30th June, 1926, was £3,464,603. The following table gives the revenue and expenditure on permanent and maintenance works for the five years 1921–22 to 1925–26 :—

COUNTRY ROADS BOARD, VICTORIA—REVENUE AND EXPENDITURE, 1921-22 TO 1925-26.

Year ended 30th June.	Revenue.					Expenditure.	
	Motor Registration and Licence Fees.	Unused Roads etc., Licence Fees.	Contributions by Municipalities.		Total.	Permanent Works.	Maintenance.
			Permanent Works.	Maintenance.			
	£	£	£	£	£	£	£
1922	118,672	21,487	61,024	104,026	429,308	288,937	267,969
1923	158,249	19,933	68,608	123,819	514,469	266,046	288,129
1924	222,251	20,110	76,355	134,349	585,742	201,615	343,233
1925	402,971	19,801	82,931	154,557	660,260	228,872	468,182
1926	632.087	19,958	88,148	178,902	918,285	302,844	788,332

(iv) *Developmental Roads.* For the purpose of constructing and maintaining subsidiary or developmental roads, the Government has been authorized to borrow sums aggregating £6,475,000. The work is carried out under the supervision of the Country Roads Board, and the State provides the whole of the money and makes provision out of State funds for liquidating the liability; the municipalities, however, are required to bear a proportion of the interest on the outlay during the period of the loan and to maintain the roads when constructed. The amount expended during the year ended 30th June, 1926 was £658,565, and the total expenditure to that date was £3,775,618.

3. Queensland.—Under "The Main Roads Act of 1920," a Main Roads Board was constituted, consisting of three members appointed by the Governor in Council. Subsequently, by "The Main Roads Acts Amendment Act of 1925," the Board was abolished, and its powers conferred upon a single commissioner. The duties of the Commissioner are to make the necessary surveys and investigations in order to determine what roads should be main roads, and, under certain circumstances, to undertake the construction and maintenance of such roads. Before any road can be proclaimed a main road, the shire councils through whose areas such road passes have the right to lodge objections thereto, and the Commissioner must consider such objections and may vary his decision. The whole of the money necessary for the construction and maintenance of main roads is provided from the Main Roads Fund at the Treasury, and the councils concerned must repay one-half the cost thereof over a period of 30 years, with interest. This fund is formed from (*a*) moneys appropriated by Parliament therefor, (*b*) fees on motor vehicles and traction engines, (*c*) fees and rents for unused roads, (*d*) moneys received from the sale of timber, sand, etc., on any main road, and (*e*) all other moneys received or recovered by the Commissioner. Wherever possible, the Commissioner arranges with local authorities to undertake the survey and construction of works, but in most cases, owing to the dearth of trained engineers in the employ of councils, the Commissioner has had to undertake most of the survey work and preparation of plans and a considerable portion of the construction. During the year ended 30th June, 1927, the receipts of the Commission amounted to £822,639, including £313,121 from the Treasury Loan Fund, £254,073 from motor fees, and £222,966 from the Commonwealth for schemes under the Main Roads Development Act (Commonwealth) and Federal Aid Scheme; and the disbursements to £795,602, including £122,101 expenditure on permanent works, £409,178 on schemes under the Commonwealth Main Roads Development Act, and £132,920 on maintenance of main roads. At that date, 4,894 miles of roads had been gazetted as main roads, and 238 miles had been surveyed during the year. In addition, 258 miles of roads had been gazetted as developmental roads up to 30th June, 1927, and 50 miles surveyed during the year.

The money made available to the State under the Commonwealth "Main Roads Development Act" is allocated and expended under the direction of the Commissioner of Main Roads.

The developmental roads sections of "The Main Roads Acts 1920 to 1925" provide that on such roads the Commissioner will be responsible for the total cost of construction, but that the local authorities concerned shall repay half the interest over a period of twenty years, and that the local authorities shall be responsible for maintenance.

4. South Australia.—The Highways Act 1926 created a Commissioner of Highways and provided for a Main Roads Fund. The Commissioner is virtually empowered to determine upon which roads he will spend the moneys available, in doing which he has to take into account (*a*) the moneys voted, or likely to be voted, by Parliament for main roads; (*b*) whether the road is or will be the main trunk route; (i) connecting any large producing area, or any area capable of becoming in the near future a large producing area, with its market or nearest port or railway station; (ii) connecting two or more large producing areas, or areas capable of becoming in the near future large producing areas, or between two or more large centres of population; (iii) between the capital and any large producing area or any large centre of population; (iv) between the capitals of this State and any other State; and (*c*) whether the area through which the road passes is, or in the near future will be, sufficiently served by a railway or railways.

The Main Roads Fund is to be credited with (*a*) licence fees and registration fees under the Motor Vehicles Acts 1921 to 1927; (*b*) licence fees under the Vehicles (Licensing) Act 1925; (*c*) motor vehicles tax under the Motor Vehicles Tax Acts 1915 to 1927; (*d*) fines, penalties, and forfeitures in respect of convictions for offences against the Motor Vehicles Acts, of the Motor Vehicles Tax Acts (exclusive of any sum received for costs), or the Width of Tires Acts; (*e*) fees for hawkers' licences issued by the Treasurer; (*f*) contributions from Councils; (*g*) all sums appropriated by Parliament for main roads; (*h*) all loans raised and appropriated for main roads.

Moneys standing to the credit of the Fund are to be used by the Commissioner for (*a*) payment of the expenses incurred in connexion with carrying out the provisions of the Act; (*b*) defraying the cost of the operations undertaken by the Commissioner in connexion with main roads and works; (*c*) payment to each council of the amount of its annual grant for main roads; (*d*) defraying the cost of any work required to be executed by the State pursuant to any agreement with the Commonwealth relating to the construction, reconstruction and maintenance of roads, etc.; (*e*) refunding to the Treasurer any moneys paid or set aside out of General Revenue pursuant to the Main Roads Fund Act 1922; or for the purpose of payment of the interest on any loan raised after the 1st July, 1926, and appropriated to main roads; and (*f*) paying during each financial year to the Public Debt Commissioners for the purposes of the reduction and redemption of any loan raised after the 1st July, 1926, and appropriated to main roads, in addition to any other sum required by law to be so paid for such purposes, at least such a sum as will amount to one and one-quarter per centum of the principal for the time being of such loan.

The Commissioner determines the amount of the Annual Main Road Grant to each Council for construction and maintenance of main roads and also the amount of money to be expended by each Council out of its revenue for the same purpose provided that such contribution shall not exceed one-half of the grant. In the case of main roads maintained departmentally the Commissioner may recover from the Council in respect of maintenance and interest charges, etc., one-third of the annual outlay or an amount calculated at £150 per mile per annum whichever amount is the smaller. The Commissioner also allocates to Councils funds voted by Parliament for roads in newly-settled areas and supervises the expenditure of funds provided under the Federal Aid Roads Scheme. The Commissioner has power to deal with cases in which any main road is being neglected by a Council or in which any work towards which a grant of assistance has been made is not being satisfactorily carried out.

The expenditure from the Main Roads Fund for year ended 30th June, 1927, was £569,904; grants in aid of rates collected paid to Councils amounted to £129,041. In the sparsely-settled districts outside the incorporated areas, the roads and bridges are constructed and maintained by the Public Works Department which expended during the same period £34,975.

5. Western Australia.—In Western Australia the construction, maintenance, and management of roads and bridges throughout the State are under the control of municipalities and district road boards which are subsidized by the Government.

6. Tasmania.—(i) *Construction.* In Tasmania the cost of construction of roads and bridges is borne almost entirely by the State Government.

Up to the 30th June, 1927, the loan expenditure on these works was £4,371,503 (roads, £3,608,312; tracks, £227,098; bridges, £536,093). In addition, half the proceeds of the sale of land has formed a Crown Lands Fund for the construction of roads to new holdings. Under this provision £671,164 has been expended. This fund has in recent years more than met the demands on it, and expenditure therefrom since 1918 has been limited to £10,000 annually, the balance being used for redemption of debt. The following table gives particulars of the amount and cost of construction for the last five years:—

ROADS AND BRIDGES, TASMANIA—GOVERNMENT EXPENDITURE ON CONSTRUCTION, 1922 TO 1927.

Period.	Expenditure.		New-road Mileage.		New Bridges.
	Loans.	Crown Lands Fund.	Cleared.	Metalled.	
	£	£	Miles.	Miles.	No.
1921–22	102,160	8,198	69	73	27
1922–23	71,676	6,412	47	57	13
1923–24	57,546	5,537	53	48	15
1924–25	130,871	5,341	139	119	16
1925–26	192,469	5,465	136	108	14
1926–27	144,327	4,888	81	81	29

In addition, in 1926–27, the sum of £45,854 provided by the Commonwealth Government was expended on roads; the conditional expenditure by the State Government is included in the above figures.

(ii) *Maintenance.* The maintenance of roads and bridges is undertaken by the municipalities with some assistance from the State Government, chiefly by way of subsidy. Under the Aid to Road Rates Act, a sum of £11,000 is distributed annually among the municipalities, in proportion as the cost of maintenance falls on their resources. Under the Main Roads Maintenance Act 1918 a further sum of £5,000 was provided out of Consolidated Revenue, which, with the addition of the motor tax, less 5 per cent., and a contribution from municipalities, is expended on the upkeep of main roads. In 1925–26 the amount available for 1,100 miles of main road was £74,300. The work is carried out in most cases by municipalities, under the general direction of an Advisory Board, on which the Government, the municipalities, and the motorists are all represented. Further, the Repairs to Roads Act 1920 provides for loans for 15 years to municipalities for the purpose of re-making roads—half the loan is repaid in instalments by the local body and the remainder by the State Government. The Government also provides for the repair of the more important bridges, and for emergency work.

The above provision for maintenance has, however, in recent years been found insufficient to cope with the heavier motor traffic and to meet the demand for a better road surface further legislation is in contemplation.

7. **Summary of Loan Expenditure on Roads and Bridges.**—Figures showing the total expenditure on roads and bridges in the States are not available. The subjoined statement, however, gives the amounts of loan expenditure by the State Governments up to the 30th June, 1927 :—

ROADS AND BRIDGES.—GOVERNMENT LOAN EXPENDITURE TO THE 30th JUNE, 1927.

Expenditure.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
	£	£	£	£	£	£	£
Total to 30/6/27	6,045,735	8,946,492	1,839,584	3,078,159	911,563	4,371,503	25,193,027

The following table shows the annual expenditure from loans on roads and bridges by the central Governments in each State during the years 1922–23 to 1926–27 :—

ROADS AND BRIDGES.—LOAN EXPENDITURE BY STATES, 1923 TO 1927.

Year ended 30th June.	N.S.W.	Victoria.	Q'land. (*a*)	S. Aust.	W. Aust.	Tasmania.	All States.
	£	£	£	£	£	£	£
1923 ..	231,271	625,620	217,500	61,450	34,331	71,017	1,241,189
1924 ..	185,578	627,078	496,000	165,940	77,744	56,752	1,609,092
1925 ..	742,266	1,177,826	200,000	132,268	92,606	129,838	2,474,804
1926 ..	972,793	1,155,087	356,517	246,908	96,835	192,469	3,020,609
1927 ..	1,726,420	1,104,345	404,292	475,601	184,911	144,327	4,039,896

(*a*) Includes expenditure on main roads through local authorities.

The two tables given above show only a small proportion of the actual expenditure upon roads and bridges in the different States, for the reason that (*a*) there have been large expenditures from revenue, both by the central Governments and by local authorities, and (*b*) the State Governments have in many cases voted grants and subsidies on the amount of rates collected, and have issued loans to local authorities either for the express purpose of the construction of roads and bridges or for the general purpose of public works construction.

§ 3. Municipalities, Shires, Etc.

1. **New South Wales.**—(i) *General.* Practically the whole of the State, with the exception of the Western Division, has been divided into municipalities and shires, the total area incorporated at the end of 1926 being 184,110 square miles, of which 2,520 square miles are included in the former and 181,590 in the latter. The areas incorporated comprise the whole of the Eastern and Central Divisions of the State, with the exception of Lord Howe Island, the islands in Port Jackson, and the quarantine station at Port Jackson.

(ii) *Municipalities.*—(*a*) *Summary.* The following table gives the number, area and population of municipalities, together with the length of roads and the number of bridges and ferries therein for the years 1922 to 1926 :—

MUNICIPALITIES, NEW SOUTH WALES—SUMMARY, 1922 TO 1926.

Year.	No. of Municipalities.	Sydney and Suburbs.		Country.		Length of Roads.	Bridges.	Ferries.
		Area.	Population.	Area.	Population.			
		Acres.		Acres.				
1922	185	95,259	934,970	1,725,875	536,050	(*a*)	(*a*)	(*a*)
1923	184	95,259	959,772	1,720,275	545,850	(*a*)	(*a*)	(*a*)
1924	181	95,259	989,390	1,593,075	552,930	10,007	673	24
1925	180	96,010	1,015,870	1,516,883	564,430	(*a*)	(*a*)	(*a*)
1926	181	96,010	1,046,100	1,521,683	591,500	(*a*)	(*a*)	(*a*)

(*a*) Not available—collected triennially.

Of the 10,007 miles of roads, 4,772 were metalled, ballasted or gravelled, 1,787 formed only, and 1,859 cleared only, while 1,589 miles were natural surface.

(*b*) *Unimproved and Improved Values.* The table hereunder gives a comparison of the unimproved and improved values for the years 1922 to 1926 inclusive :—

MUNICIPALITIES, NEW SOUTH WALES.—CAPITAL VALUES, 1922 TO 1926.

Year.	Sydney.	Suburbs.	Total Metropolis.	Country.	Grand Total.
			UNIMPROVED VALUE.		
	£	£	£	£	£
1922	36,838,607	54,642,223	91,480,830	32,343,067	123,823,897
1923	36,918,354	60,984,924	97,903,278	34,238,069	132,141,347
1924	45,593,929	65,559,272	111,153,201	36,068,427	147,221,628
1925	45,656,053	70,391.344	116,047,397	37,931.396	153,978,793
1926	45,675,896	74,746,427	120,422,323	40,224,070	160,646,393
			IMPROVED VALUE.		
1922	103,667,740	155,607,105	259,274,845	90,627,326	349,902,171
1923	107,239,980	174,364,307	281,604,287	99,739,138	381,343,425
1924	141,629,260	191,921,240	333,550,500	106,363.410	439,913,910
1925	151,367,380	207,838.392	359,205,772	112,733.389	471,939,161
1926	151,528,760	222,560,966	374,089,726	121,329,258	495,418,984

(*c*) *Revenue and Expenditure.* Particulars of the revenue and expenditure of municipalities for the year ending 31st December, 1926, under various headings, are given below :—

MUNICIPALITIES, NEW SOUTH WALES.—REVENUE AND EXPENDITURE, 1926.

Particulars.	Sydney.	Suburbs.	Country.	Total.
REVENUE.				
	£	£	£	£
General fund	3,460,970 (*a*)	2,211,803	1,296,335	3,508,138 (*b*)
Trading accounts		51,475	716,095	767,570 (*b*)
Special and local funds . .		55,731	508,287	564,018 (*b*)
Gross revenue . .	3,460,970	2,319,009	2,520,717	8,300,696
EXPENDITURE.				
General fund	3,587,126 (*a*)	2,535,022	1,354,360	3,889,382 (*b*)
Trading accounts		44,380	581,745	626,125 (*b*)
Special and local funds . .		54,464	458,011	512,475 (*b*)
Gross expenditure . .	3,587,126	2,633,866	2,394,116	8,615,108

(*a*) Items of revenue and expenditure for the city of Sydney cannot be allocated to the different headings shown for municipalities. (*b*) Exclusive of Sydney.

The next table shows the gross revenue and expenditure of all municipalities for the five years 1922 to 1926 :—

MUNICIPALITIES, NEW SOUTH WALES.—REVENUE AND EXPENDITURE, 1922 TO 1926.

Municipalities.	1922.	1923.	1924.	1925.	1926.
GROSS REVENUE.					
	£	£	£	£	£
Sydney	2,348,854	2,568,357	2,855,443	2,975,740	3,460,970
Suburban	1,561,760	1,709,262	1,869,399	2,197,524	2,319,009
Country	1,701,288	1,836,654	2,024,252	2,242,840	2,520,717
Total	5,611,902	6,114,273	6,749,094	7,416,104	8,300,696
GROSS EXPENDITURE.					
Sydney	2,187,856	2,371,043	2,666,616	3,086,313	3,587,126
Suburban	1,618,413	1,790,120	2,064,142	2,331,723	2,633,866
Country	1,637,140	1,711,734	1,883,926	2,135,667	2,394,116
Total	5,443,409	5,872,897	6,614,684	7,553,703	8,615,108

(*d*) *Assets and Liabilities.* The financial position of the municipalities as at the 31st December, 1926, is shown by the following statement of assets and liabilities.

MUNICIPALITIES, NEW SOUTH WALES.—ASSETS AND LIABILITIES, 1926.

Particulars.	Sydney.	Suburbs.	Country.	Total.
ASSETS.				
	£	£	£	£
Bank balances and cash ..	22,428,281 (*a*)	414,804	553,627	968,431 (*b*)
Outstanding rates		120,074	197,559	317,633 (*b*)
Sundry debtors		182,047	300,480	482,527 (*b*)
Stores and materials ..		39,418	116,817	156,235 (*b*)
Land, buildings, furniture, etc.		1,153,751	5,478,886	6,632,637 (*b*)
Other		100,299	36,562	136,861 (*b*)
Total	22,428,281	2,010,393	6,683,931	31,122,605
LIABILITIES.				
Loans, outstanding interest and sundry creditors ..	21,746,233 (*a*)	2,794,217	2,273,115	5,067,332 (*b*)
Debts due to Government and interest thereon		76,945	2,404,038	2,480,983 (*b*)
Bank overdrafts		209,469	263,009	472,478 (*b*)
Other		58,979	83,059	142,038 (*b*)
Total	21,746,233	3,139,610	5,023,221	29,909,064

(*a*) Particulars for the city of Sydney cannot be allocated to the different headings shown for municipalities. (*b*) Exclusive of Sydney.

(iii) *Shires.* (*a*) *Summary.* The following table gives the number, area, population, and unimproved capital value of shires, together with the length of the roads, and the number of bridges and ferries therein. It is not possible to give the improved capital value or the assessed annual value, as shires are not compelled to make these valuations.

SHIRES, NEW SOUTH WALES.—SUMMARY, 1922 TO 1926.

Year.	No. of Shires.	Area.	Population.	Unimproved Capital Value.	Length of Roads.	Bridges.	Ferries.
	No.	sq. miles.	No.	£	miles.	No.	No.
1922	136	181,140	688,560	135,380,748	(*a*)	(*a*)	(*a*)
1923	136	181,140	691,000	140,392,104	(*a*)	(*a*)	(*a*)
1924	136	181,339	686,770	144,710,409	88,704	3,861	172
1925	136	181,590	692,280	148,251,227	(*a*)	(*a*)	(*a*)
1926	136	181,582	684,400	154,614,441	(*a*)	(*a*)	(*a*)

(*a*) Not available—collected triennially.

Of the 88,704 miles of roads, 18,369 were metalled or ballasted, 13,745 formed only, and 27,216 cleared only, the balance being natural surface.

(*b*) *Revenue and Expenditure.* The revenue and expenditure of shires for the years 1922 to 1926 are shown in the following table. Included in the receipts for 1926 are Government grants amounting to £1,113,095 :—

SHIRES, NEW SOUTH WALES.—REVENUE AND EXPENDITURE, 1922 TO 1926.

Particulars.	1922.	1923.	1924.	1925.	1926.
REVENUE.					
General Fund—	£	£	£	£	£
General rates (including interest)	1,033,921	1,064,842	1,129,863	1,178,501	1,275,540
Government endowment	156,861	150,296	146,705	149,345	147,525
Public works	218,952	204,129	323,357	679,322	1,038,343
Health administration ..	88,165	98,532	103,500	106,125	118,188
Public services ..	16,052	15,712	15,885	19,106	17,651
Shire property ..	20,344	8,124	11,741	14,460	19,534
Miscellaneous	13,852	16,977	15,364	20,920	32,858
Special and Local Funds ..	99,960	157,547	190,271	249,745	293,155
Total revenue ..	1,648,107	1,716,159	1,936,686	2,417,524	2,942,794
EXPENDITURE.					
General Fund—					
Administrative expenses	168,802	158,362	159,719	181,713	185,986
Public works	1,245,857	1,268,550	1,467,867	1,948,301	2,437,726
Health administration ..	95,578	104,437	107,894	116,133	125,599
Public services ..	32,205	31,526	31,432	38,945	41,792
Shire property ..	18,518	7,041	8,524	10,438	15,224
Miscellaneous (*a*) ..	11,626	20,327	24,236	51,791	87,074
Special, Local, and Loan Funds	91,295	131,715	173,070	205,885	259,042
Total expenditure ..	1,663,881	1,721,958	1,972,742	2,553,206	3,152,443

(*a*) Includes interest on loans and overdraft—£7,597 in 1922, £13,185 in 1923, £19,934 in 1924, £29,083 in 1925, and £54,271 in 1926.

(*c*) *Assets and Liabilities.* The finances of the shires at the end of the year 1926 showed an excess of assets of £45,157. The following table gives particulars of assets and liabilities as at the 31st December, 1926:—

SHIRES, NEW SOUTH WALES.—ASSETS AND LIABILITIES, 1926.

Assets.	Amount.	Liabilities.	Amount.
	£		£
Bank balances and cash ..	451,276	Loans outstanding, interest and sundry creditors ..	1,284,860
Outstanding rates	194,096	Bank overdrafts	392,110
Sundry debtors	119,388	Other	137,752
Stores and materials ..	54,383	Debts due to the Government and interest thereon ..	351,383
Land, buildings, furniture, plant, machinery, etc.	1,333,286		
Other	58,833		
Total	2,211,262	Total	2,166,105

2. Victoria.—(i) *General.* Local Government is established throughout the State (with the exception of French Island), the various divisions being termed cities, towns, boroughs, or shires. Melbourne and Geelong were incorporated under special statutes prior to the establishment of a general system of local government, and except in a few details are not subject to the provisions of the Local Government Act.

In addition to the endowment of £50,000, the municipalities received from the Government during the financial year 1926–27 a sum of £62,300 out of the Licensing Fund as the equivalent for (*a*) fees for licences, (*b*) fees for the registration of brewers and spirit merchants, and (*c*) fines, penalties, and forfeitures incurred under the Licensing Act 1915.

The financial years of the cities of Melbourne and Geelong end on the 31st December and the 31st August respectively ; those of all other municipalities on the 30th September.

(ii) *Municipalities.* (*a*) *Summary.* The following table shows the number of cities, towns, boroughs, and shires, with estimated population, number of ratepayers and dwellings, and value of rateable property for the years 1923 to 1927 inclusive :—

MUNICIPALITIES, VICTORIA.—SUMMARY, 1923 to 1927.

Year ending 30th September.	Number of Municipalities.	Estimated Population.	Number of Ratepayers (both sexes).	Estimated Number of Dwellings.	Estimated Value of Rateable Property.	
					Total.	Annual.
			CITIES, TOWNS, AND BOROUGHS.			
	No.	No.	No.	No.	£	£
1923	53	963,180	270,058	220,392	233,586,201	13,116,589
1924	53	998,950	279,292	229,066	264,693,364	14,964,345
1925	53	1,031,670	291,910	237,352	288,230,793	16,388,842
1926	55	1,072,510	314,386	247,756	314,333,446	17,778,661
1927	55	1,106,010	319,568	256,245	339,221,826	19,020,312
			SHIRES.			
1923	139	616,410	200,834	143,809	221,623,773	11,200,825
1924	139	627,420	213,317	147,830	235,274,597	11,816,074
1925	139	635,340	221,345	151,721	250,480,405	12,588,177
1926	139	632,550	246,161	151,353	257,350,043	12,933,459
1927	139	643,950	254,403	154,411	267,100,576	13,426,424

(*b*) *Revenue and Expenditure.* The table hereunder shows the revenue from various sources, and the expenditure under various heads, exclusive of loan revenue and expenditure, of municipalities during the years 1922 to 1926 :—

MUNICIPALITIES, VICTORIA.—REVENUE AND EXPENDITURE, 1922 TO 1926.

Items.		1922.	1923.	1924.	1925.	1926.
			REVENUE.			
		£	£	£	£	£
Taxation	Rates	2,303,664	2,559,847	2,847,282	3,152,570	3,380,749
	Licences ..	137,036	152,437	155,009	162,430	161,682
	Dog fees ..	24,316	24,832	26,211	27,836	28,131
	Market and weighbridge dues ..	99,485	99,337	97,794	111,548	114,773
Government endowments and grants		75,627	60,607	87,783	88,335	147,014
Contributions for streets, etc.		111,983	141,484	180,502	264,996	320,582
Sanitary charges		146,559	162,129	175,520	185,091	202,360
Rents		102,784	108,502	125,544	133,623	137,941
Electric light and gas works		722,083	794,544	913,471	986,101	1,057,596
Other sources		308,235	385,204	391,637	466,550	561,718
Total Revenue ..		4,031,777	4,488,923	5,000,753	5,579,080	6,112,546
Loans		706,677	885,303	1,281,423	1,535,960	1,404,566
Total Receipts ..		4,738,454	5,374,226	6,282,176	7,115,040	7,517,112

MUNICIPALITIES, VICTORIA.—REVENUE AND EXPENDITURE, 1922 TO 1926—*continued.*

Items.	1922.	1923.	1924.	1925.	1926.
EXPENDITURE FROM REVENUE.					
	£	£	£	£	£
Salaries, etc.	319,430	340,319	359,493	381,815	407,009
Sanitary work, street cleaning etc.	363,706	396,524	433,220	457,885	454,107
Lighting	130,722	131,342	134,025	144,064	153,292
Fire brigades' contributions	48,526	49,225	55,412	58,250	64,508
Public Works { Construction	271,007	294,711	404,661	479 690	454,247
Public Works { Maintenance	1,324.845	1,366.202	1,345.278	2,104.402	2,195,045
Electric Light and Gas Works	540,704	582,380	680,568	715,498	757,456
Formation of private streets, etc.	147,612	163,660	343,978	426,689	446,961
Redemption of loans ..	136,090	165,675	180,987	211,152	229,913
Interest on loans	305,289	343,164	386,946	457,669	513,222
Charities	26,436	26,288	28,550	30,187	35,469
Other expenditure	332,067	356,199	393,545	433,154	581,493
Total from Revenue ..	3,946,434	4,215,689	5,246,663	5,900,455	6,292.722
EXPENDITURE FROM LOANS.					
	£	£	£	£	£
Roads and Bridges ..	170,324	269,620	515,337	619,424	664,555
Water and Irrigation ..	1,351	3,225	5,216	1,855	335
Sewerage and Drainage ..	37,166	54,650	64,838	47,294	42,093
Electric Light and Gas ..	*	191,655	239,406	226,400	205,780
Public Buildings ..	18,762	53,995	119,277	114,472	101,271
Other purposes	479,074	312,158	337,349	526,515	304,153
Total from Loan ..	706,677	885,303	1,281,423	1,535,960	1,318,187
Grand Total ..	4,653,111	5,100,992	6,528,086	7,436,415	7,610,909

* Included with "Other Purposes."

(*c*) *Assets and Liabilities.* The assets of municipalities may be classified under three heads (*a*) the municipal fund, (*b*) the loan fund, and (*c*) property; the liabilities under two heads—(*a*) the municipal fund, and (*b*) the loan fund. The following table shows the amount of municipal assets and liabilities for the years 1922 to 1926:—

MUNICIPALITIES, VICTORIA.—ASSETS AND LIABILITIES, 1922 TO 1926.

Items.	1922.	1923.	1924.	1925.	1926.
ASSETS.					
MUNICIPAL FUND—	£	£	£	£	£
Uncollected rates ..	176,830	202,251	231,623	282,495	286,338
Other assets	636,509	730,603	1,098,843	1,390,966	1,049,190
LOAN FUND—					
(*a*) Sinking funds—					
Amount at credit ..	430,689	455,766	500,214	496,522	545,712
Arrears due ..	511	670	127	724	210
(*b*) Unexpended balances	442,360	526,622	501,858	495,980	587,609
PROPERTY—					
Buildings, markets, etc. ..	4,804,008	5,170,071	5,773,520	6,221,030	6,842,280
Waterworks	253,520	255,737	264,630	258,890	340,920
Gasworks	129,020	145,874	174,660	176,330	185,690
Total	6,873,447	7,487,594	8,545,475	9.322,937	9,837,949

MUNICIPALITIES, VICTORIA.—ASSETS AND LIABILITIES, 1922 TO 1926—*continued.*

Items.	1922.	1923.	1924.	1925.	1926.
LIABILITIES.					
MUNICIPAL FUND—					
Arrears due sinking funds	511	670	127	724	210
Overdue interest ..	6,026	8,054	7,445	8,440	9,475
Bank overdrafts ..	858,733	665,866	892,893	1,106,264	902,826
Other liabilities ..	389,340	440,031	767,691	990,177	819,356
LOAN FUND—					
Loans outstanding ..	5,714,570	6,601,731	7,574,523	8,146,750	9,076,787
Due on loan contracts ..	177,755	380,839	237,695	256,794	359,496
Due on current contracts ..	88,936	155,233	161,031	144,677	145,051
Total	7,235,871	8,252,424	9,641,405	10,653,826	11,313,195

3. Queensland.—(i) *General.* The whole of the State (except a few islands in Moreton Bay) is incorporated into cities, towns, and shires under the Local Authorities Act of 1902 and its amendments.

(ii) *Municipalities.* (*a*) *Summary.* The following table gives particulars of the area, population, number of inhabited dwellings, and assets and liabilities of cities and towns and of shires for the years 1922 to 1926 :—

MUNICIPALITIES, QUEENSLAND.—SUMMARY, 1922 TO 1926.

Year.	No.	Area.	Population.	Number of Inhabited Dwellings.	Rateable Value.	Assets.	Liabilities.	
							Government Loans.	Total.
CITIES AND TOWNS. (*a*)								
		sq. miles.	No.	No.	£	£	£	£
1922 ..	36	522	343,799	71,887	19,486,391	3,332,459	1,034,842	2,939,178
1923 ..	36	537	354,187	73,874	20,606,516	3,809,427	1,187,596	3,427,871
1924 ..	35	506	364,754	75,846	21,222,982	4,566,242	1,500,037	4,409,566
1925(*a*) ..	28	845	(*b*)	77,895	21,880,425	5,562,366	1,759,571	5,294,089
1926(*c*) ..	28	843	483,094	102,630	29,952,796	8,216,424	2,159,277	9,516,460
SHIRES. (*a*)								
1922 ..	134	669,372	427,739	96,840	50,284,568	1,427,832	835,847	1,122,690
1923 ..	134	669,627	446,943	98,608	51,041,891	1,690,868	918,288	1,349,752
1924 ..	135	669,388	460,240	101,494	51,858,728	1,835,457	1,091,384	1,529,015
1925(*a*) ..	124	669,049	(*b*)	103,984	52,059,980	2,119,994	1,316,755	1,837,306
1926(*c*) ..	124	669,051	396,325	86,659	48,473,508	1,558,397	1,219,713	1,727,255

(*a*) From 1st October, 1925, Greater Brisbane was constituted, absorbing the areas of 2 cities, 6 towns, 10 shires, and part of 2 other shires.
(*b*) Total population of cities, towns, and shires, 839,634.
(*c*) Figures relating to assets and liabilities include waterworks, electric light works, and railways and tramways controlled by local authorities.

(*b*) *Revenue and Expenditure.* The revenue and expenditure (including loan moneys) of cities and towns, and of shires for each year from 1922 to 1926, are given hereunder :—

MUNICIPALITIES, QUEENSLAND.—REVENUE AND EXPENDITURE, 1922 TO 1926.

Year.	Revenue.			Expenditure.			
	Rates.	Government Loans and Subsidies. (a)	Total.	Public Works and Services. (b)	Government Loan Redemption.	Office Expenses and Salaries.	Total.
CITIES AND TOWNS.							
	£	£	£	£	£	£	£
1922 ..	872,905	116,762	1,411,713	1,087,680	46.175	106,392	1,569,525
1923 ..	917,827	215,221	1,918,986	1,228,434	48,097	112,978	1,771,091
1924 ..	950,890	296,384	2,265,220	1,841,001	46.514	123,574	2,453,753
1925 ..	1,012,243	297,026	2,560,252	2,112,443	50,568	160,514	2,944,333
1926 ..	1,361.278	113.974	4,297.760	3,036.262	49.735	199.259	4,793.973
SHIRES.							
1922 ..	732,906	96,204	1,084.665	732,520	34,810	127,135	1,060.141
1923 ..	749,474	328,462	1,317,104	980,630	36,747	146,887	1,314,514
1924 ..	828,790	311,576	1,409,704	1,041,912	39,872	159,402	1,429,385
1925 ..	941,742	407,688	1,659,136	1,246,692	42,407	147,597	1,676,824
1926 ..	833,478	412,056	1,526,121	1,196,885	44,804	120,569	1,591,427

(a) Includes Main Road Receipts. (b) Includes Expenditure on Main Roads.

The figures in the foregoing tables cover all the activities of the Local Authorities throughout Queensland such as :—Road repairs, street lighting, etc ; waterworks, electric light, and railways and tramways controlled by local bodies.

During the period covered by the table some changes have been made by the absorption of Shires into the Metropolitan Area (see note (a) previous table). Since 1st December, 1928, the Brisbane City Council has assumed control of the Metropolitan Water Supply and Sewerage Works.

4. South Australia.—(i) *General.* A large proportion of South Australia is unincorporated, the balance being under municipal corporations in the larger cities and towns, and district councils in outside areas. These bodies are subsidized by Government, and special grants allocated on the recommendation of the Commissioner of Highways are given for the maintenance and construction of main roads.

(ii) *Local Authorities.* (a) *Summary.* During the past five years the number of corporations and district councils has increased by 12, the total being 196, of which 11 corporations and 13 district councils are in the metropolitan area, and 28 corporations and 144 district councils in outside areas. According to the latest available information there are about 1,062 miles of roads in use for general traffic under the control of corporations and about 44,485 miles under the control of district councils, and of these totals, 14½ miles are wood-blocked, 65½ miles are bitumen and concrete, and 12,974 miles are tar-paved, metalled or gravelled. The following table gives the area, population, number of occupied dwellings, capital and assessment values and outstanding loans for corporations and district councils separately for the years 1922 to 1926 :—

LOCAL AUTHORITIES, SOUTH AUSTRALIA.—SUMMARY, 1922 TO 1926.

Year.	Area.	Estimated Population.	Occupied Dwellings.	Capital Value.	Assessment Value.	Outstanding Loans.
MUNICIPAL CORPORATIONS.						
	Acres.	No.	No.	£	£	£
1922	59,279	220.555	48,120	51.100,946	2,544,974	439,319
1923	59,279	223,875	49,260	54.983,943	2,759,282	443,893
1924	62,699	232,044	51,441	60,792,222	3,095,439	481,060
1925	64,080	238,009	52,856	65,550.732	3,300,048	525,518
1926	64,560	245.389	54,697	73.228.273	3,550.895	508,604
DISTRICT COUNCILS.						
1922	30,196,509	272,164	59,737	68,293,518	3,429,776	135,424(a)
1923	30,177,455	282,266	62.223	74,949,756	3,747,623	157,546(a)
1924	30,535,351	285,759	63.572	81,665,583	4,083,357	175,061(a)
1925	31,023,175	294,749	66,585	85,608,532	4,280,375	188,145(a)
1926	33.390,987	307,998	70.096	94,432.691	4.668.397	221,831(a)

(a) Includes advances through District Councils to settlers for vermin-proof fencing, &c., amounting to £167,380 for 1926.

(*b*) *Revenue and Expenditure.* The next table gives the revenue and expenditure of corporations and district councils for the years 1922 to 1926, showing in separate columns the receipts and expenditure on main roads. The financial year of municipal corporations ends on the 30th November and that of district councils on the 30th June.

LOCAL AUTHORITIES, SOUTH AUSTRALIA.—REVENUE AND EXPENDITURE, 1922 TO 1926.

Year.	Local Government (exclusive of Government Grants Account).						Government Grants Account (Main Roads).	
	Revenue.			Expenditure.			Revenue.	Expenditure.
	Rates.	Subsidies.	Total.	Roads.	Other Public Works.	Total.		
				MUNICIPAL CORPORATIONS.				
	£	£	£	£	£	£	£	£
1922 ..	315,772	29,328	470,183	185,758	188,756	500,421	33,222	35,364
1923 ..	346,844	34,576	511,078	248,270	204,314	584,005	25,637	22,541
1924 ..	382,008	38,538	567,344	240,902	201,698	609,446	28,010	27,486
1925 ..	412,933	38,258	713,764	278,236	211,322	727,834	23,111	23,886
1926 ..	450,996	48,601	755,472	347,691	226,389	744,556	38,873	41,590
				DISTRICT COUNCILS.				
1922 ..	242,591	50,101	356,359	213,557	53,323	361,290	171,756	185,091
1923 ..	277,563	56,281	407,980	222,574	59,380	403,194	217,267	213,612
1924 ..	317,583	64,966	464,414	262,124	54,289	445,463	241,544	235,245
1925 ..	335,690	74,797	506,889	308,068	66,215	511,725	278,065	278,086
1926 ..	369,133	81.259	561.063	321,717	91,931	547,633	344.768	338,865

5. **Western Australia.**—(i) *General.* In this State there are three forms of local authorities, namely :—(*a*) municipalities, (*b*) district road boards, and (*c*) local boards of health, the two former covering the whole of the State. Local boards of health are of three descriptions, (*a*) municipal, the members being the same as those of the municipal council of the municipality in which each is situated, (*b*) those under the control of road boards, and (*c*) those not under the control of road boards or municipalities. Several of the two latter are inactive. The financial year of municipalities and municipal boards of health terminates on the 31st October, and that of road boards and other local boards of health on the 30th June.

(ii) *Municipalities.* (*a*) *Summary.* The following table gives various particular regarding municipalities for the years 1923 to 1927.

MUNICIPALITIES, WESTERN AUSTRALIA.—SUMMARY, 1923 TO 1927.

Year ended 31st Oct.—	Municipalities.	Area.	Population.	Dwelling Houses.	Valuation of Rateable Property.		Length of Roads and Streets.
					Capital Value.	Annual Value.	
	No.	Acres.	No.	No.	£	£	Miles.
1923 ..	21	58,981	172,881	35,498	31,054,031	1,810,173	993
1924 ..	21	58,981	172,427	35,498	32,881,961	1,910,798	994
1925 ..	21	58,981	172,866	35,550	35,315,316	1,982,967	997
1926 ..	21	58,981	177,591	35,832	36,882,613	2,099,513	1,003
1927 ..	21	58,981	182,417	36,598	39,111,843	2,173,203	*a* 717

a Exclusive of cleared roads, which are included in previous years.

(*b*) *Revenue and Expenditure.* Revenue and expenditure of municipalities during the years 1923 to 1927 are given hereunder :—

MUNICIPALITIES, WESTERN AUSTRALIA.—REVENUE AND EXPENDITURE, 1923 TO 1927.

Year ended 31st October—	Revenue.				Expenditure.			
	From Rates.	From Govt. Grants.	From other Sources.	Total.	Works and Improvements.	Interest and Other Charges. on Loans.	Other Expenses.	Total.
	£	£	£	£	£	£	£	£
1923 ..	277,993	939	593,937	872,869	202,758	190,738	471,140	864,636
1924 ..	287,863	4,372	738,040	1,030,275	236,050	191,618	599,952	1,027,620
1925 ..	297,143	200	860,140	1,157,483	300.799	214.226	561.578	1,076,603
1926 ..	310,230	84	729,344	1,039,658	226.822	229,335	630.828	1,086,985
1927 ..	324,739	167	879,273	1,204,179	312,719	200.097	662,827	1,175,643

(*c*) *Assets and Liabilities.*—The table below shows the assets and liabilities of municipalities at the 31st October in each financial year 1923 to 1927 :—

MUNICIPALITIES, WESTERN AUSTRALIA.—ASSETS AND LIABILITIES, 1923 TO 1927.

Year ended 31st October—	Assets.				Liabilities.	
	Balance in Hand.	Value of Property.	Accrued Sinking Funds.	Total.	Outstanding Debentures and Bonds.	Total.
	£	£	£	£	£	£
1923	48,580	1,574,805	477,016	2,212,099	1,802,782	1,894,126
1924	51,460	1,570,010	449,007	2,193,487	1,864,993	1,961,763
1925	136,917	1,580,435	487,670	2,329,990	2,135,132	2,253,841
1926	92,088	1,625,556	503,428	2,361,770	2,183,885	2,323,370
1927	114.934	1,706,737	550,192	2,608,814	2,329,191	2,465,136

(iii) *District Road Boards.* (*a*) *Summary.* In the next table the unimproved value is given, but in some instances the annual value is also given, and those portions of districts rated under the annual value are not included in the area rated under the unimproved capital value. The population at the date of the census of 4th April, 1921, was 160,970, and the number of dwellings 41,662.

On the 30th June, 1927, the population was estimated at 213,042, and the number of dwelling-houses at 51,075. Nine districts, however, only give figures at time of the 1921 census.

DISTRICT ROAD BOARDS, WESTERN AUSTRALIA.—SUMMARY 1923 TO 1927.

Year ended 30th June—	Number of Road Districts.	Area.	Unimproved Capital Value (Approximate).	Length of Roads in Existence.	Assets.	Liabilities.	Outstanding Loans.
	No.	sq. miles.	£	miles.	£	£	£
1923 ..	121	975,828	16,202,890*a*	38,907	379,649	292,915	210,755
1924 ..	122	975,828	17,310,105*a*	39,863	418,060	348,690	242,043
1925 ..	123	975,828	18,444,720*a*	41,666	448,318	388,403	280,089
1926 ..	124	975,828	20,080,137*a*	44.280*b*	504,599	447,515	314,869
1927 ..	125	975,828	21,119,659*a*	15,070	571,668	545,700	409,002

(*a*) Exclusive of one Board which rates under the annual value only.
(*b*) Exclusive of cleared roads which are included in previous years.

(*b*) *Revenue and Expenditure.* The revenue and expenditure of district road boards are shown in the following table for the years 1923 to 1927 :—

DISTRICT ROAD BOARDS, WESTERN AUSTRALIA.—REVENUE AND EXPENDITURE, 1923 TO 1927.

Year ended 30th June—	Revenue.				Expenditure.			
	Rates.	Government Grants.	Other.	Total.	Administration.	Works.	Other.	Total.
	£	£	£	£	£	£	£	£
1923 ..	193,018	56,518	120,202	369,738	38,704	203,267	105,315	347,286
1924 ..	213,848	74,184	146,743	434,775	44,233	288,014	113,604	445,851
1925 ..	233,770	66,516	186,452	486,738	46,166	299,204	140,092	485,462
1926 ..	241,243	98,123	231,174	570,540	47,416	378,334	146,891	572,641
1927 ..	270,464	85,427	321,369	677,260	55,685	447,178	184,471	687,334

(iv) *Local Boards of Health.* (*a*) *General.* On the 31st October, 1927, there were 21 local boards of health within municipalities, and on the 30th June, 1927, 83 under control of road boards, and 23 extra-municipal boards. Of the extra-municipal boards 7 were inactive during the year.

(*b*) *Finances.* The appended table shows the number of boards, their revenue and expenditure, and the assets and liabilities of such as were active from 1923 to 1927. The financial year of municipal boards ends on the 31st October, and that of other boards on the 30th June.

LOCAL BOARDS OF HEALTH, WESTERN AUSTRALIA.—FINANCES, 1923 TO 1927.

Year.	Number.	Revenue.			Expenditure.		Assets.	Liabilities.
		Rates.	Sanitary Charges and Rubbish Fees.	Total.	Sanitary and Rubbish Service.	Total.		
		£	£	£	£	£	£	£
1923 ..	125	56,523	70,700	140,056	89,430	133,191	88,456	16,192
1924 ..	122	60,255	66,378	137,047	92,324	136,099	89,311	16,549
1925 ..	123	55,907	68,738	145,844	92,236	148,265	84,526	16,348
1926 ..	124	58,640	66,658	141,624	96,770	145,478	85,503	19,651
1927 ..	127	64,275	73,539	152,675	101,594	148,654	92,992	24,362

6. **Tasmania.**—(i) *General.* The whole State, with the exception of the cities of Hobart and Launceston, which were incorporated under separate Acts, is divided into municipal districts.

(ii) *Municipalities.* (*a*) *Summary.* The following table gives the number of municipalities, valuations, outstanding loans and length of roads for the years 1922 to 1926. The latest available figure for inhabited dwellings is for the year 1921, when the number was 45,950.

MUNICIPALITIES, TASMANIA.—SUMMARY, 1922 TO 1926.

Year.	Number of Municipalities.	Valuations.			Outstanding Loans.	Length of Roads.
		Annual Value.	Unimproved Value.	Total Capital Value.		
HOBART AND LAUNCESTON.						
	No.	£	£	£	£	Miles.
1922	2	784,945	6,139,362	14,123,587	1,924,252	179
1923	2	887,583	6,388,152	15,140,686	2,017,691	187
1924	2	984,592	6,711,549	16,521,819	2,062,609	195
1925	2	1,088,541	6,789,728	17,056,147	2,390,189	196
1926	2	1,122,945	6,914,733	17,565,443	2,481,320	197
COUNTRY MUNICIPALITIES.						
1922	47	1,396,941	14,735,436	29,034,047	407,719	11,557
1923	47	1,423,174	15,168,896	30,318,877	417,535	11,725
1924	47	1,472,749	15,535,414	31,180,993	464,286	11,692
1925	47	1,533,372	15,944,225	32,244,369	536,339	11,871
1926	47	1,544,598	15,867,915	32,130,186	561,089	12,014

(*b*) *Revenue and Expenditure.* The next table gives the revenue and expenditure of all municipalities for the years 1922 to 1926 :—

MUNICIPALITIES, TASMANIA.—REVENUE AND EXPENDITURE, 1922 TO 1926.

Year.	Revenue.			Expenditure.			
	Rates.	Government Grants.	Total.	Administration.	Works and Services. (*b*)	Interest and Sinking Fund.	Total.
HOBART AND LAUNCESTON.							
	£	£	£	£	£	£	£
1922 ..	178,921	2,056	577,707	29,491*a*	403,555	110,716	544,133
1923 ..	234,313	1,263	641,070	28,361*a*	336,961	125,297	613,380
1924 ..	244,006	450	555,868*c*	47,619	265,643	132,449	604,903
1925 ..	257,328	885	1,021,275	48,020	564,214	145,407	758,274
1926 ..	279,259	3,738	790,702	47,996	462,908	157,880	748,000
COUNTRY MUNICIPALITIES.							
1922 ..	156,408	30,694	269,388	36,038	193,188	24,248	270,386
1923 ..	167,616	26,026	267,674	36,003	181,087	28,438	264,395
1924 ..	179,297	31,745	284,769	37,697	201,181	28,421	299,253
1925 ..	189,759	38,646	377,618	35,327	238,196	30,225	369,476
1926 ..	200,014	47,984	368,302	36,106	250,097	37,675	348,521

(*a*) Hobart only (Launceston figures not available). (*b*) Including expenditure from Loans. (*c*) Excluding Loans.

7. Northern Territory.—(i) *Municipality of Darwin.* The following particulars relate to the year 1925–26 :—Area, 2,024 acres, population 924, number of occupied dwellings 231, of unoccupied dwellings 3, and of other buildings 132. Revenue from general rates £1,602, from Government grants £801, other sources £443, total £2,846 ; expenditure £3,332.

(ii) *Bagot Roads District.* During the year 1925–26 the receipts amounted to £141, and the expenditure to £4, leaving (with a balance of £185 brought forward from the previous year) a balance in hand of £322.

8. Basis for Municipal Rating and Limits for Rates.—These matters were dealt with at some length in Official Year Book, No. 17, pp. 124–25, but limitations of space preclude their repetition in the present issue.

§ 4. Summary of Municipal Finance.

1. General.—In the preceding parts of this chapter certain particulars have been given regarding local authorities in each individual State. In this paragraph, comparative figures are given for each State regarding the financial operations of the local governing bodies referred to in § 3. The particulars in the next two tables refer to financial years as follows :—New South Wales : calendar year 1926. Victoria : 30th September, 1926, except Melbourne, 31st December, and Geelong, 31st August, 1927. Queensland : calendar year 1926. South Australia : Corporations, 30th November, and district councils, 30th June, 1926. Western Australia : Municipalities, 31st October, 1926, district road boards, 30th June, 1926. Tasmania : calendar year 1926.

2. **Number, Revenue, Expenditure, and Valuation of Municipalities.**—The subjoined table shows the number, revenue, expenditure, and valuation of local authorities in each State and in Australia during the years indicated above. It should be noted that, excepting in Tasmania, the metropolitan water supply systems are not under municipal control; the particulars given of revenue and expenditure for the five States other than Tasmania do not, therefore, include revenue and expenditure on account of these systems.

MUNICIPALITIES IN EACH STATE.—FINANCIAL SUMMARY, 1926.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
No. of local authorities ..	317	194	152	196	272(*d*)	49	1,180
RECEIPTS.							
	£	£	£	£	£	£	£
Rates—							
General ..	11,243,490	3,380,749	1,672,950	820,129	610,113	179,660	29,195,485
Other		*e* 506,946	521,806		..	299,613	
Government grants, etc. ..		147,015	3,629,125	513,501	164,865	51,722	
Loans and other sources ..		3,482,402		366,546	976,844	628,009	
Total ..	11,243,490	7,517,112	5,823,881	1,700,176	1,751,822	1,159,004	29,195,485
EXPENDITURE.							
Works, services, etc. ..	11,767,551	5,072,330	4,233,147	1,670,644	1,805,104	504,985	30,336,129
Interest on loans and overdrafts		513,222	483,653			151,225	
Redemptions, sinking funds, etc. ..		229,913	263,083			44,330	
Administration		407,009	319,828			84,102	
Other ..		1,388,435	1,085,689			311,879	
Total ..	11,767,551	7,610,909	6,385,400	1,670,644	1,805,104	1,096,521	30,336,129
VALUATIONS.							
Capital value of property ..	*a*315,260,834	606,322,402	*f*78,426,304	167,660,964	*c*60,231,502	49,695,629	1,277,597,635
Annual value of property ..	(*b*)	32,446,736	(*b*)	8,219,292	(*b*)	2,667,543	(*b*)

(*a*) Unimproved capital value of all rateable property. (*b*) Not available. (*c*) The valuation of road districts is the unimproved capital value. (*d*) Including 127 Boards of Health, some of which are within municipalities and others within road districts. (*e*) Sanitary charges, licences, fees, etc. (*f*) Rateable value.

3. **Local Government Loans, 1926.**—The following table shows the amount of loans raised by local authorities during the year 1926, of loans current at the end of that year, and the liability on account of interest and sinking fund, and of loans redeemed during 1926:—

LOCAL AUTHORITIES.—LOANS, 1926.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	£	£	£	£	£	£	£
Loans raised during year ..	3,447,204	1,219,461	1,299,265	60,321	102,314	229,843	6,448,408
Loans current at end of year	20,577,403	9,076,787	9,322,439	730,435	2,498,754	3,042,409	45,248,227
Annual liability on account of interest	1,022,951	(*a*)	440,887	39,817	130,112	157,897	(*a*)
Total sinking fund at end of year	1,953,499	545,942	267,923	31,578	462,959	407,524	3,669,425
Amount of loans redeemed during year	(*a*)	(*a*)	(*a*)	46,288	108,801	110,762	(*a*)

(*a*) Not available.

§ 5. Water Supply, Sewerage, and Drainage.

1. New South Wales.—(i) *General.* In Sydney and its suburbs the water supply and sewerage systems are controlled by the Metropolitan Water, Sewerage and Drainage Board, and in Newcastle and its suburbs by the Hunter District Water Supply and Sewerage Board. In country districts, both waterworks and sewerage works are constructed by the Public Works Department, and, when completed, handed over to the municipalities affected, by which the cost must be repaid.

(ii) *Metropolitan Waterworks.* (*a*) *General.* During the year ended 30th June, 1927, progress was made with the pressure tunnel, 10 miles long and 10 feet in diameter, which is being constructed to convey water to the city. Service reservoirs of 36 million gallons and 19 million gallons respectively are being constructed at Killara and Waverley-Vaucluse and amplification of pumping plant and mains is proceeding. The maximum day's consumption in the metropolitan area was 108,720,000 gallons. The mileage of mains now totals 3,663 miles.

(*b*) *Water Supplied, etc.* The following table gives the number of houses and estimated population supplied, and other details for the years 1923 to 1927 :—

WATERWORKS, SYDNEY.—WATER SUPPLIED, 1923 TO 1927.

Year ended 30th June—	Number of Houses Supplied.	Estimated Population Supplied.	Average Daily Supply.	Total Supply for the Year.	Average Daily Supply.		Mains Laid.
					Per House.	Per Head of Estimated Population.	
	No.	No.	1,000 Gallons.	1,000 Gallons.	Gallons.	Gallons.	Miles.
1923 ..	239,528	1,197,640	56,595	20,657,319	236	47.26	126
1924 ..	250,804	1,254,020	58,628	21,458,036	234	46.78	126
1925 ..	259,799	1,298,995	57,355	20,934,784	221	44.15	150
1926 ..	268,558	1,342,790	67,142	24,506,739	250	50.00	175
1927 ..	280,157	1,400,785	70,344	25,675,530	251	50.22	211

(*c*) *Finances.*—The following statement shows the revenue and expenditure on account of the services of waterworks, sewerage and drainage during the year 1926–27, and is followed by a statement giving similar figures for the combined services for a period of five years.

WATERWORKS, SEWERAGE, AND DRAINAGE, SYDNEY, 1926-27.

Item.	Revenue.	Working Expenses, Sinking Fund Contribution, and Renewals.	Capital Indebtedness.	Percentage of Working Expenses and Sinking Fund Contribution on Revenue.	Percentage of Revenue on Average Capital Cost.	Interest.	Deficit.
	£	£	£	%	%	£	£
Water ..	1,399,581	*a* 628,022	17,861,937	39.49	7.85	872,006	100,447
Sewerage	833,384	*b* 301,307	10,909,276	35.59	7.71	539,638	7,561
Drainage	33,944	*c* 17,176	442,200	47.14	7.64	21,895	5,127

(*a*) Includes payment of £69,657 to State Debt Commissioners in reduction of Capital Indebtedness, and £75,360 on Renewals.

(*b*) Includes payment of £41,817 to State Debt Commissioners in reduction of Capital Indebtedness, and £4,712 on Renewals.

(*c*) Includes payment of £1,693 to State Debt Commissioners in reduction of Capital Indebtedness, and £1,174 on Renewals.

WATERWORKS, SEWERAGE, AND DRAINAGE SYSTEMS, SYDNEY.—FINANCES, 1923 TO 1927.

Year ended 30th June—	Revenue.	Working Expenses.	Capital Cost, exclusive of Items on which Interest is not charged.	Percentage of Working Expenses on Revenue.	Percentage of Revenue on Capital Cost.	Interest Payable on Capital Cost.	Profit after Payment of Working Expenses and Interest.
	£	£	£	%	%	£	£
1923	1,654,666	594,774	19,877,104	35.95	8.33	992,503	67,389
1924	1,861,637	624,887	21,239,237	33.56	8.77	1,057,732	179,018
1925	1,860,306	687,274	23,196,472	36.94	8.02	1,102,923	70,109
1926	2,131,471	908,400	26,875,871	42.62	7.93	1,316,784	– 93,713
1927	2,266,909	946,505	29,213,413	41.75	7.76	1,433,539	– 113,135

(iii) *Metropolitan Sewerage and Drainage Systems.* (*a*) *General.* In addition to the usual progress made in connecting additional houses, 74 miles of new sewers were laid, the total length now being 1,491 miles. The quantity of sewage pumped was 4,530 million gallons.

(*b*) *Houses Drained, Population Served, Length of Sewers, etc.* Particulars for the years 1923 to 1927 are given hereunder :—

SEWERAGE AND DRAINAGE SYSTEMS, SYDNEY.—PARTICULARS OF SERVICES, 1923 TO 1927.

Year ended 30th June—	Number of Houses Drained.	Estimated Population Served.	Total Length of Sewers.	Total Length of Storm-water Drains.	Ventilating Shafts Erected.	Sewers Ventilated.
	No.	No.	Miles.	Miles.	Feet.	Miles.
1923	159,390	796,950	1,273.71	65.70	532,470	1,162
1924	165,215	826,075	1,313.90	65.96	543,306	1,208
1925	170,774	853,870	1,358.19	66.37	556,032	1,246
1926	176,388	881,940	1,415.57	67.17	568,506	1,283
1927	179,580	897,900	1,491.37	74.67	578,932	1,312

(iv) *Newcastle Water Supply.* (*a*) *General.* The work of service reservoir construction, commenced during the preceding year, was continued, and reservoirs were constructed at Toronto (capacity 310,000 gallons), Adamstown (capacity 507,300 gallons), and St. James Road, New Lambton (capacity 505,600 gallons). Reservoirs were also in course of construction at Tenambit and Pelton at 30th June, 1927. The water supply to the Cockle Creek District, and to the Cessnock Division was considerably improved during the year by the construction of additional pipe lines.

Eighty-two miles of water mains were laid, bringing the total up to 671 miles.

The amplification of the 36-in. Chichester trunk gravitation main is being investigated by an Engineering Committee appointed by the Minister for Public Works.

(*b*) *Particulars of Services.* The following table supplies details for the years 1923 to 1927 :—

NEWCASTLE WATER SUPPLY.—SUMMARY, 1923 TO 1927.

Year ended 30th June—	Number of Houses Supplied.	Estimated Population Supplied.	Average Daily Supply.	Total Quantity Supplied for the Year.	Average Daily Supply.		Mains Laid
					Per House.	Per Head of Estimated Population.	
	No.	No.	1,000 gallons.	1,000 gallons.	Gallons.	Gallons.	Miles.
1923	28,036	140,180	4,806	1,754,417	171	34.28	29
1924	29,568	147,840	5,756	2,106,614	195	38.92	21
1925	31,405	157,025	6,334	2,312,045	201	40.34	22
1926	33,997	169,985	7,310	2,668,214	215	43.00	47
1927	36,600	183,000	8,139	2,970,781	222	44.47	75

(c) *Finances.* The next table gives the revenue, working expenses, capital debt, and net profit for the years 1923 to 1927 :—

NEWCASTLE WATER SUPPLY.—FINANCES, 1923 TO 1927.

Year ended 30th June—	Revenue.	Working Expenses.	Capital Debt.	Percentage of Working Expenses on Revenue.	Percentage of Revenue on Capital Debt.	Interest and Sinking Fund.	Profit or Loss after Paying Working Expenses, Interest, and Sinking Fund.
	£	£	£	%	%	£	£
1923 ..	110,076	62,155	2,271,295	56.47	4.85	54,682	— 6,761
1924 ..	143,138	63,883	2,730,003	44.63	5.24	58,701	20,554
1925 ..	153,045	53,319	3.046,823	34.84	5.02	61,543	38,183
1926 ..	163,807	65,328	3,244,121	39.89	5.05	69,817	28,662
1927 ..	170,601	78,397	3,478,909	45.95	4.90	75,818	16,386

NOTE.—The minus sign (—) represents loss.

The capital debt in respect of water supply set down as£3, 478,909, includes expenditure amounting to £2,075,089 on the Chichester Scheme, which was vested in the Board on 26th June, 1925. The capital expenditure in respect of transferred works is £1,403,820. The percentage of revenue on transferred (and, therefore, revenue-producing) works is 12.15 per cent. as against 4.90 per cent. on total debt.

(v) *Newcastle Sewerage Works.* (*a*) *General.* The sewerage works for Newcastle and suburbs as originally designed have been completed by the Department of Public Works and vested in the Board.

The amplification, extension, and improvement of such sewerage works have been reported upon favourably by the Parliamentary Standing Committee on Public Works, and the works will be put in hand in the near future.

An Engineering Experts Committee is inquiring into the question of the amplification, extension and improvement of the stormwater drainage works of the Newcastle district. The works comprised in the Cottage Creek stormwater area have been authorized and are under construction, and the Throsby Creek catchment area scheme is now being prepared.

(*b*) *Sewerage Connexions and Length of Sewers.* During the year ended 30th June, 1927, the number of properties connected with sewers was 1,148, making a total of 19,219. New sewers of a total length of 6 miles were constructed by the Board, bringing the total length of sewers under the Board's control to 182 miles.

(c) *Finances.* Particulars in regard to chief items for the years 1923 to 1927 are given hereunder :—

NEWCASTLE SEWERAGE.—FINANCES, 1923 TO 1927.

Year ended 30th June—	Revenue.	Working Expenses.	Capital Debt.	Percentage of Working Expenses on Revenue.	Percentage of Revenue on Capital Debt.	Interest and Sinking Fund.	Profit or Loss after Paying Working Expenses, Interest, and Sinking Fund.
	£	£	£	%	%	£	£
1923 ..	49,551	19,692	592,148	39.74	8.37	36,172	— 6,313
1924 ..	56,210	21,915	610,849	38.99	9.20	37,083	— 2,788
1925 ..	63,707	21,910	636,475	34.39	10.01	37,326	4,471
1926 ..	68,412	22,625	641,648	33.07	10.66	38,437	7,350
1927 ..	75,175	25,578	659,442	34.03	11.40	39,767	9,830

NOTE.—The minus sign (—) indicates loss.

(vi) *Water Supply and Sewerage in Country Towns**. (*a*) *General.* Under the *Local Government Act* 1919, the Public Works Department may, upon application by any municipal or shire council, construct, out of moneys voted therefor by Parliament, waterworks or sewerage works, and when completed transfer the control thereof to the council. In each case the cost, with interest, is repayable by instalments spread over a period corresponding to the probable life of the work.

(*b*) *Waterworks.* Up to the 30th June, 1927, waterworks in 68 towns had been completed and handed over to the respective local authorities. The capital cost of these works was £2,053,476; the outstanding capital indebtedness as at the date mentioned was £1,900,368, and the annual repayment instalments totalled £95,989. The Broken Hill and Junee water supplies are administered by the Public Works Department under special Acts; these services entailed capital expenditures of £481,220 and £104,633, respectively.

(*c*) *Sewerage and Stormwater Drainage Works.* Up to the 30th June, 1927, sewerage works in eleven towns, and stormwater drainage works in sixteen towns had been completed. Capital expenditure thereon totalled £663,402, and the outstanding capital indebtedness £607,007. The repayment instalments total £29,692 per annum.

2. Victoria.—(i) A. *The Melbourne and Metropolitan Board of Works.* (*a*) *General.* All land within 13 miles of the General Post Office is included within the metropolitan area for water supply and sewerage purposes. This area covers 434 square miles of land area, and in 1927 embraced 24 cities, and part of another city, together with parts of 13 shires, or a total of 38 municipalities or portions thereof. The whole of the city of Mordialloc and of the shire of Moorabbin are included in the metropolis for water supply purposes, and the Board is also empowered to supply water to certain municipalities outside the 13-mile radius, to the Metropolitan Farm at Werribee, the outfall-sewer area, and elsewhere. Various other shires also arrange for bulk supplies of water. The liability on the 30th June, 1927, for loans raised by the Board, was £17,837,090. The Board is still empowered to borrow £1,302,844 before reaching the limit of its borrowing powers.

(*b*) *Revenue and Expenditure.* The following table shows the actual receipts and expenditure, and the loan receipts and expenditure of the Board from 1922–23 to 1926–27:—

WATER SUPPLY AND SEWERAGE, MELBOURNE.—REVENUE AND EXPENDITURE, 1922-23 TO 1926-27.

Particulars.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
ORDINARY RECEIPTS.					
	£	£	£	£	£
Water supply	500,671	545,835	587,765	656,116	710,273
Sewerage, etc.	542,698	472,074	521,205	577,186	620,154
Live stock—Metropolitan farm ..	42,045	85,059	77,763	109,474	82,410
Interest { Water supply ..	4,587	12,427	10,178	3,276	3,525
Interest { Sewerage	11,306	11,190	16,503	14,089	18,306
Superannuation Contributions ..	..	..	..	3,215	9,268
Total	1,101,307	1,126,585	1,213,414	1,363,356	1,443,936

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* Excluding the area of operations of the Hunter District Water Supply and Sewerage Board.

WATER SUPPLY AND SEWERAGE, MELBOURNE.—REVENUE AND EXPENDITURE, 1922–23 TO 1926–27—*continued*.

Particulars.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
ORDINARY EXPENDITURE.					
	£	£	£	£	£
General management	64,027	68,803	73,739	74,536	77,150
Live stock, etc.—Metropolitan farm	46,632	101,311	86,546	103,485	89,702
Maintenance { Water supply ..	65,551	81,991	80,557	84,468	99,968
Maintenance { Sewerage ..	60,548	74,459	76,877	83,342	96,894
Interest { Water supply ..	203,569	238,572	283,145	305,182	340,663
Interest { Sewerage	430,418	441,567	475,680	506,985	549,190
Patriotic, Relief Funds, etc. ..	10	..	..	500	2,319
Superannuation, Pensions, and Compensation Allowances ..	5,756	5,562	9,061	6,113	12,546
Contribution Government Loan Redemption	..	..	..	761	179
River Snagging	..	..	..	5,422	5,428
Total	876,511	1,012,265	1,085,605	1,170,794	1,274,039
LOAN RECEIPTS.					
	£	£	£	£	£
Water supply	19,074	18,588	19,015	21,327	31,282
Sewerage	61,959	61,992	58,348	77,654	94,535
Proceeds of loans	749,410	1,260,716	1,783,293	1,775,000	800,000
Miscellaneous	25,978	21,875	28,557	65,974	31,744
Alterations to water mains ..	..	..	5,426	9,757	10,979
Alterations to sewers	..	..	3,785	1,758	606
Total	856,421	1,363,171	1,898,424	1,951,470	969,146
LOAN EXPENDITURE.					
	£	£	£	£	£
Water supply construction ..	297,365	348,483	540,938	706,162	660,387
Sewerage construction	351,006	425,653	546,356	823,163	648,449
Renewals, main outfall ..	2,280	1,654	874	..	..
Cleaning rising main	..	1,156	2,409	..	..
Alterations to water mains ..	..	..	11,341	12,361	20,774
Alterations to sewers	..	..	869	1,126	5,063
Expenses in floating and redemption of loans	80,840	954,774	707,785	332,142	4,671
Miscellaneous	49,911	106,081	102,500	99,527	125,622
River improvements	..	..	..	..	4,249
Main drains	..	..	..	..	39,168
Total	781,402	1,837,801	1,913,072	1,974,481	1,508,383

B. *Melbourne Water Supply.* (*a*) *Progress of Work.* The principal works completed or in hand during the year ended 30th June, 1927, were:—Construction of Maroondah Dam (upper portion and outlet tower). Duplication of Maroondah Syphons, 40,553 lineal feet. Raising lining of Maroondah Aqueduct, 21,794 lineal feet. Construction of O'Shannassy Dam. Raising lining of O'Shannassy Aqueduct, 2,329 lineal feet. Diversion Syphon, O'Shannassy Weir, 852 lineal feet. Construction of outlet and diversion works, Silvan Reservoir. Construction of service reservoir at North Essendon. Construction of dividing wall and screening chamber, Caulfield Reservoir During the year 1 mile 68½ chains of aqueducts were constructed, and (allowing for water mains lifted) there was a net increase in large mains laid of 19 miles 60½ chains, and of 75 miles 40¾ chains in pipes under 12 inches diameter, in various parts of the metropolis.

The total length of aqueducts, mains, and reticulation amounted to 2,313 miles.

(*b*) *Quantity of Water, Number of Houses, and Population Supplied.* The following table gives various particulars for the years 1923 to 1927. The rate levied over the period has remained at sixpence in the pound.

WATER SUPPLY, MELBOURNE.—PARTICULARS OF SERVICES, 1923 TO 1927.

Year ended 30th June—	Number of Houses Supplied.	Estimated Population Supplied.	Average Daily Consumption.	Total Water Consumption for the Year.	Average Daily Consumption.		Length of Mains, Reticulation, etc.
					Per House.	Per Head of Estimated Population.	
	No.	No.	1,000 Gallons.	1,000 Gallons.	Gallons.	Gallons.	Miles.
1923 ..	195,763	867,230	51,206	18,690,114	269.3	60.8	1,931
1924 ..	207,333	918,485	47,642	17,436,949	236.4	53.4	2,011
1925 ..	215,476	954,558	52,563	19,185,605	248.6	56.1	2,102
1926 ..	223,603	990,561	54,696	19,964,016	249.1	56.2	2,216
1927 ..	232,276	1,028,983	57,023	20,813,537	250.2	56.5	2,313

(*c*) *Capital Cost, Revenue, Expenditure and Surplus.* The total cost of construction, revenue, working expenses (exclusive of renewals and special war expenditure), interest and surplus for the five years ending 30th June, 1927, together with the total amounts to that date are given below :—

WATER SUPPLY, MELBOURNE.—FINANCES, 1923 TO 1927.

Year ended 30th June—	Capital Cost.	Revenue.	Working Expenses.	Percentage of Working Expenses on Revenue.	Interest.	Surplus.
	£	£	£	%	£	£
1923	285,352	507,475	*a* 85,407	16.83	*b* 217,723	204,345
1924	314,521	524,165	*a* 86,853	16.57	*b* 247,883	189,429
1925	513,523	579,502	*a* 97,992	16.91	*b* 294,845	186,665
1926	680,889	664,926	*a* 105,597	15.88	*b* 326,476	232,853
1927	614,223	720,124	*a* 113,706	15.79	*b* 367,363	239,055
Total to date ..	7,799,428	13,736,348	2,341,090	17.04	6,100,816	5,294,442

(*a*) Exclusive of Renewals. (*b*) Includes Interest on Renewals and Sinking Funds.

C. *Melbourne Sewerage.* (*a*) *Progress of Work.* The Pumping Station at Spotswood has been completely converted to electric drive three-phase current, 440 volts 25 cycles and 415 volts 50 cycles being used. All the normal daily sewage is pumped by the electric pumps, whilst certain of the reciprocating steam pumps are held in readiness to deal with storm-water and emergencies. The total volume of sewage pumped during the year 1927 was 12,549,580,000 gallons, or 34,382,411 gallons per day.

Notwithstanding a decrease in pumping of 399,840,000 gallons of sewage as compared with the year 1925–26, the unit cost of raising 1,000 gallons 100 feet was reduced from .511d. to .477d. The station has now reached a stage at which any additional quantity of sewage and storm-water, if spread out fairly evenly over the year, can be handled very cheaply.

Venturi meters have been fitted to all the electric pumps, and the quantity of sewage dealt with can now be ascertained accurately. In the past it was only possible to estimate this.

Apart from the normal maintenance and repairs necessary to keep the plant efficient the principal work carried out was in connexion with the duplication of the Straining Wells. On account of the special conditions under which this work is being carried out, progress has not been as rapid as was anticipated, but it should be completed during the current year.

At the present time—in the northern and southern buildings at the Pumping Station, Spotswood—the two sewerage systems can still be handled wholly by electric energy or partly by steam, either separately or unitedly. The normal procedure, however, is to deal with everything by means of the electrical pumps in the southern building. The nominal capacity of the five electrical centrifugal pumping units amounts to 78 million gallons of sewage daily. In addition, the seven reciprocal steam-driven pumps of 300 horse-power have a combined daily capacity of 56 million gallons, making the total available capacity equal to 134 million gallons of sewage per day. The usual practice is to deal with the normal daily load of about 36 million gallons of sewage with two 50-cycle and one 25-cycle electric pumps, the remaining two being left in reserve, while the heavy peak loads which, through storm-water entering the sewers, are sometimes experienced, are handled either by the steam engines or the remaining electric pumps, according to circumstances.

Four branch sewers were completed ; 49 reticulation areas and one minor reticulation extension were also completed. Three branch sewers and eleven reticulation areas were also in progress. By day labour, one main sewer was completed, and one reticulation area was also completed, one main and one branch sewer were in progress, also one reticulation area, 246 minor reticulation extensions, 2,497 branches and short pieces of reticulation, and two alterations were completed. At 30th June, 1927, there were 31 separate contracts and day labour jobs in progress, ranging in cost from £100 to £10,465.

(*b*) *Number of Houses Connected, etc.* Particulars of services for the years 1923 to 1927 are given below :—

SEWERAGE, MELBOURNE.—PARTICULARS OF SERVICES, 1923 TO 1927.

Year ended 30th June—	Number of Houses for which Sewers are Provided.	Estimated Population for which Sewers are Provided.	Average Daily Pumping.	Total Sewage Pumped for the Year.	Average Daily Pumping.		Length of Sewers, etc.
					Per House.	Per Head of Estimated Population.	
	No.	No.	1,000 Gallons.	1,000 Gallons.	Gallons.	Gallons.	Miles.
1923 ..	175,379	776,929	36,335	13,262,326	212.3	47.9	1,812
1924 ..	182,987	810,632	35,750	13,084,370	199.5	45.0	1,861
1925 ..	191,318	847,538	36,847	13,449,080	196.9	44.4	1,925
1926 ..	199,918	885,637	35,478	12,949,420	181.4	40.9	2,001
1927 ..	208,003	921,453	34,382	12,549,580	168.6	38.1	2,091

(*c*) *Disposal of Night-soil from Unsewered Premises.* The agreements entered into with 29 councils for the collection and delivery by them of night-soil from unsewered premises within their respective municipal districts have continued in operation during the year. The total number of pans cleaned was 1,409,583, and the night-soil was disposed of by burial by the Board at its various depots at Brooklyn, Campbellfield, Janefield, Burwood, and Moorabbin, though operations at Janefield ceased on 23rd March, 1927.

In view of the difficulty of disposing of night-soil, the Sewerage Committee after inspecting the septic tank system in Adelaide, decided to recommend that legislative authority be procured to compel the installation of septic tanks or some other approved treatment.

(*d*) *Main Drains.* A number of necessary amendments to the *Metropolitan Drainage and Rivers Act* 1923 was passed in December, 1926, and though all the amendments desired by the Board were not included, it was decided that construction work should be proceeded with immediately.

Early in 1927 a list of works was approved, and before the end of the year contracts amounting in all to £115,535 were let.

Most of the principal drainage areas in Melbourne and suburbs have been defined, and preliminary schemes have been prepared for dealing with the storm waters from a number of these areas.

(*e*) ***Finances.*** The capital cost, revenue, working expenses (exclusive of renewals), percentage of working expenses on revenue, interest and deficiency for the years 1923 to 1927 are given below :—

SEWERAGE, MELBOURNE.—FINANCES, 1923 TO 1927.

Year ended 30th June—	Capital Cost.	Revenue.	Working Expenses.	Percentage of Working Expenses on Revenue.	Interest.	Deficiency.
	£	£	£	%	£	£
1923	263,050	552,643	*a* 116,804	21.14	*b* 438,577	2,738
1924	337,740	480,748	*a* 119,571	24.87	*b* 451,168	89,991
1925	441,275	537,657	*a* 129,050	24.00	*b* 485,027	76,420
1926	665.133	600,445	*a* 133,988	22.31	*b* 520,508	54,051
1927	463,363	633,165	*a* 148,814	23.50	*b* 560,539	76,188
Total to date	10,493,351	9,165,009	2,147,803	23.43	9,470,097	2,452,891

(*a*) Exclusive of Renewals. (*b*) Includes interest on Renewals and Sinking Funds.

(*f*) *Metropolitan Sewage Farm.* On 30th June, 1927, the total area of the farm was 21,312 acres. The following table gives details in connexion therewith for the years 1923 to 1927 :—

METROPOLITAN SEWAGE FARM.—FINANCES, 1923 TO 1927.

Year ended 30th June –	Capital Cost.	Revenue.	Working Expenses.	Interest.	Net Cost of Sewage Purification.	Trading Profit.
	£	£	£	£	£	£
1923	28,654	20,282	*a*26,441	29,744	35,903	11,285
1924	36,081	28,903	*a*26,786	31,995	29,878	19,968
1925	19,136	30,298	*a*26,413	34,471	30.586	21,688
1926	220,847	42,391	*a*25,703	41,578	24,890	33,945
1927	27,566	35,097	331,376	48,650	44,929	24,505
Total to date ..	944,140	635,794	373,452	689,576	393,320	373,378

(*a*) Exclusive of Renewals.

(ii) *Geelong Waterworks and Sewerage Trust.* (*a*) *General.* The Geelong Waterworks and Sewerage Trust, constituted in 1908, consists of five commissioners, two of whom represent the city of Geelong, one the town of Geelong West, one the town of Newtown and Chilwell, and one the shires of Bellarine, Corio and South Barwon jointly. The amount of loan money which may be raised is limited to £725,000 for water supply undertaking, £710,000 for sewerage undertaking, and £220,000 for sewerage installation to properties under the deferred payment system. The population supplied is about 44,000.

(*b*) *Water Supply.* The catchment area is about 16,000 acres. The works comprise the Korweinguboora Reservoir and the Bolwarra Weir on Eastern Moorabool River, together with the necessary channels, mains and reservoirs. The storage capacity of all the reservoirs is 2,738,119,808 gallons, and there are 231 miles of reticulation mains within the city of Geelong and its suburbs. The total expenditure on waterworks to the 30th June, 1927, was £619,753, and the revenue for the year 1926–27 was £53,340.

(*c*) *Sewerage Works.* The sewerage scheme consists of a main outfall sewer to the ocean at Black Rock, about 9 miles from Geelong, and 121 miles of reticulation mains have already been laid. The drainage area is 9,489 acres, and the number of buildings within the drainage area is 10,722, and within the sewered areas 10,200, while 10,044 buildings have been connected with the sewers. Up to 30th June, 1927, the total expenditure on sewerage works was £556,142 and on the cost of sewerage installations under deferred payment conditions £215,619, of which £65,727 is outstanding. The revenue amounted to £41,690 18s. 11d.

(iii) *Bendigo Sewerage Authority.* The members of the Bendigo City Council constitute this Authority. The sewerage district comprises the whole area of the city of Bendigo. The works when completed are estimated to cost £400,000, and comprise treatment works consisting of (*a*) non-septic liquefying tanks and oxidizing chambers without filters, but with land disposal of effluent for irrigating grass and crops ; (*b*) main outfall sewer, main, sub-main, branch, and reticulation sewers, of which over 49 miles had been constructed by the end of February, 1928, at which date 3,012 premises had been connected to sewers. An unique feature of the scheme is the entire omission of the " boundary trap " from house sewers with resulting omission of " induct vent " to house sewers and the omission of all ventilation on street sewers, the main and reticulation sewers all being amply ventilated by the house sewer ventilation, while the consequent all round saving both of first cost and maintenance is considerable. Results are still completely satisfactory after five years in operation without boundary traps. Expenditure to end of March, 1928, was £324,079.

(iv) *Water Supply in Country Towns and Districts.* Most of the country waterworks are controlled by the State Rivers and Water Supply Commission, but a number of other waterworks is controlled by Waterworks Trusts or by municipal corporations.

The following table gives particulars regarding waterworks under the control of trusts and municipal corporations for the years 1923 to 1927 :—

COUNTRY WATERWORKS, VICTORIA.—FINANCES, 1923 TO 1927.

Year.	Under Waterworks Trusts.				Under Municipal Corporations.			
	Number of Trusts.	Capital Cost.	Capital Indebtedness.	Current Interest Outstanding.	Number of Corporations.	Capital Cost.	Capital Indebtedness.	Current Interest Outstanding.
	No.	£	£	£	No.	£	£	£
1923 ..	98	1,278,847	949,510	15,178	29	785,602	506,475	3,152
1924 ..	99	1,322,315	983,663	13,712	29	785,602	503,890	9,811
1925 ..	102	1,383,538	1,036,516	14,545	29	785,788	500,595	3,329
1926 ..	105	1,457,155	1,098,512	17,787	29	786,388	498,195	3,656
1927 ..	102	1,541,086	1,176,434	14,150	29	807,433	515,631	2,141

3. **Queensland.**—(i.) *The Metropolitan Water Supply and Sewerage Board, Brisbane.* (*a*) *General.* The whole of the water supply in the metropolitan area, including bulk supply to the city of Ipswich, is filtered. The principal filtration works are situated at Holt's Hill, Mount Crosby, and consist of eleven slow sand type of filters, capable of treating 16,500,000 gallons of water per 24 hours; the supply from Enoggera Reservoir is also filtered. The total capacity of the service reservoirs, on Bartley's Hill, Highgate Hill, Wickham Terrace, and Tarragindi Hill, is about 21,000,000 gallons.

The 42-in. and 36-in. trunk mains laid from Mount Crosby in 1925 have been in constant use since that date. Three new units of pumping plant have been installed at Mount Crosby Pumping Station, the third unit of which was put under steam in December, 1926. A new weir and overbridge over the Brisbane River at Mount Crosby was completed in 1926.

To provide for drought periods an electrical pumping station for supplying Lake Manchester with water was completed in November, 1927. A pipe line and tunnel between Gold Creek Reservoir and Enoggera Reservoir was practically completed at the end of 1927. The object of this is to make more use of Gold Creek water, and to supply districts in the Breakfast Creek area. To benefit certain districts, a new 24-in. trunk main has been laid from River-road to Eildon Hill, with the object of strengthening all districts beyond Eildon Hill, and as far as Sandgate. A reinforced concrete elevated water tower at Paddington Heights, holding 100,000 gallons of water, serves inhabitants on the higher points. The construction of a reservoir on Roles' Hill, Manly, was commenced during 1927.

During the year 1927 nearly 80 miles of mains were laid and new services installed numbered about 4,000.

(*b*) *Brisbane Waterworks. Summary.* The following table gives a summary of operations for the last five years :—

WATERWORKS, BRISBANE.—SUMMARY, 1923 TO 1927.

Year.	Length of Reticulation Mains.	Number of Tenements Connected.	Estimated Population Supplied.	Quantity Supplied.	Average Daily Supply.	Average Daily Supply per Head of Estimated Population.
	Miles.	No.	No.	1,000 Gallons	Gallons.	Gallons.
1923	620½	48,368*a*	235,980	4,292,246	11,759,579	46.76
1924	645¾	50,152*a*	246,300	4,378,486	11,963,078	44.68
1925	675	53,119*a*	258,175	4,703,044	12,885,052	45.80
1926	714	56,887*a*	275,015	5,392,671	14,774,442	48.88
1927	744¾	57,485*a*	288,494	4,642,277	12,718,570	44.10

(*a*) Metropolitan area.

The total length of the trunk mains is 185½ miles.

(*c*) *Brisbane Sewerage Scheme.* Reticulation work in Brisbane and South Brisbane is being proceeded with and premises within the reticulated areas are being connected to the sewers. Twenty-two and a half miles of main sewers and 95½ miles of reticulation sewers and house connexion branches have been constructed and 9,450 premises have been connected.

(*d*) *Brisbane Waterworks and Sewerage Works Finances.* The subjoined table gives particulars regarding finance during the years 1923 to 1927 :—

WATER AND SEWERAGE WORKS, BRISBANE.—FINANCES, 1923 TO 1927.

Year.	Capital Cost.	Net Revenue from Rates.	Working Expenses.	New Works Construction.	Interest and Redemption of Loans, including Sinking Fund. (*a*)
	£	£	£	£	£
1923	5,106,768	339,915	119,299	746,723	224,232
1924	5,872,547	402,272	157,370	785,068	294,420
1925	6,364,380	481,571	187,420	491,833	368,295
1926	6,776,465	516,351	198,143	412,085	373,053
1927	7,266,706	642,328	222,450	490,241	378,137

(*a*) In addition to interest on loans, the following payments have been made for interest on overdraft :—Year 1926, £96 11s. 6d.; year 1927, £17,007 14s. 4d. These amounts have not been included in the figures quoted in the table.

(ii) *Country Towns Water Supply.* In addition to the City of Brisbane, there were at the end of the year 1926 thirty-two country towns in Queensland provided with water supply systems constructed by municipalities chiefly from Government loans. The subjoined statement gives particulars of all water supply systems, exclusive of Brisbane, for the year 1926 :—

QUEENSLAND.—PARTICULARS OF COUNTRY WATER SUPPLY SYSTEMS, 1926.

Cost of Construction to 31st December, 1926—£1,748,678.

Receipts.	£	*Expenditure.*	£
Rates and sales of water	202,972	Office and salaries	19,249
Government and other loans	69,102	Construction	92,585
Other	42,639	Maintenance	62,216
		Interest and redemption	77,197
		Other expenses	66,418
Total	314,713	Total	317,665
Assets	1,494,505	Liabilities	1,185,452

4. **South Australia.**—(i) *General.* The water supply and sewerage systems in this State are constructed and maintained by the Public Works Department.

(ii) *Adelaide Waterworks.* (*a*) *Summary.* The following table gives particulars for the years 1922–23 to 1926–27, the figures for consumption being recorded by gaugings taken at the reservoirs and including evaporation and absorption. There are 54,270 meters in the Adelaide district.

ADELAIDE WATERWORKS.—SUMMARY, 1922-23 TO 1926-27.

Year ended 30th June—	Number of Assessments	Annual Value.	Area Supplied.	Capacity of Reservoirs.	Length of Mains.	Annual Consumption.
	No.	£	Acres.	Million Gallons.	Miles.	1,000 Gallons.
1923	91,903	3,337,345	111,295	7,753	1,034	6,599,000
1924	100,002	3,794,755	111,295	7,753	1,076	6,720,000
1925	104,301	4,202,080	111,872	7,753	1,108	6,836,000
1926	115,237	4,712,962	111,872	7,753	1,146	7,517,000
1927	119,058	4,996,390	114,452	7,753	1,193	7,150,000

(*b*) *Finances.* Particulars for the years 1922–23 to 1926–27 are given below :—

ADELAIDE WATERWORKS.—FINANCES, 1922-23 TO 1926-27.

Year ended 30th June—	Capital Cost.	Revenue.		Expenses.			Percentage of Net Revenue on Capital Cost.
		Rates.	Total.	Engineering Branch.	Revenue Branch.	Total.	
	£	£	£	£	£	£	%
1923	2,924,702	167,465	232,478	47,532	9,737	57,269	5.99
1924	3,100,856	194,158	268,574	53,673	10,972	64,645	6.58
1925	3,166,088	220,151	280,327	59,020	11,193	70,213	6.64
1926	3,241,024	240,538	312,728	62,147	12,201	74,348	7.35
1927	3,281,781	276,621	351,163	62,710	11,332	74,042	8.44

(iii) *Adelaide Sewerage.* Particulars for the years 1922–23 to 1926–27 are given hereunder :—

ADELAIDE SEWERAGE.—SUMMARY, 1922-23 TO 1926-27.

Year ended 30th June—	Length of Sewers.	Number of Connexions.	Capital Cost of Revenue-Producing Works.	Revenue.		Working Expenses.		Percentage of Net Revenue on Capital Cost.
				Rates, etc.	Total.	Maintenance, etc.	Total.	
	Miles.	No.	£	£	£	£	£	%
1923 ..	390	42,879	997,604	83,266	98,657	17,356	29,514	6.93
1924 ..	406	45,415	1,095,683	87,066	100,707	19,428	29,646	6.49
1925 ..	424	47,413	1,166,066	95,464	105,188	19,616	28,826	6.55
1926 ..	437	49,380	1,160,394	106,148	114,933	24,924	32,704	7.09
1927 ..	448	51,296	1,326,638	131,780	139,732	20,887	28,075	8.42

(iv) *Country Towns Water Supply.* (*a*) *Summary.* The chief items of information regarding these undertakings are set forth in the table below for the years 1922–23 to 1926–27.

COUNTRY TOWNS WATERWORKS, SOUTH AUSTRALIA.—SUMMARY, 1922-23 TO 1926-27.

Year ended 30th June—	Number of Assessments.	Area Supplied.	Capacity of Reservoirs.	Length of Mains.	Annual Consumption.
	No.	Acres.	Million Gallons.	Miles.	1,000 Gallons.
1923	60,552	4,933,732	6,350	3,257	1,071,094
1924	60,200	11,252,740	8,679	3,415	984,714
1925	60,684	11,565,800	8,679	3,600	1,181,706
1926	45,346*a*	11,721,033	9,031	3,754	1,374,555
1927	43,113*a*	11,731,961	9,031	3,920	1,386,655

(*a*) Assessments have been regrouped.

(*b*) *Finances.* The next table gives financial information for the years 1922–23 to 1926–27 :—

COUNTRY TOWNS WATERWORKS, SOUTH AUSTRALIA.—FINANCES, 1922-23 TO 1926-27.

Year ended 30th June—	Capital Cost.	Revenue.		Working Expenses.			Percentage of Net Revenue on Capital Cost.
		Rates.	Total.	Engineering Branch.	Revenue Branch.	Total.	
	£	£	£	£	£	£	%
1923 ..	4,562,092	78,649	105,865	56,039	8,034	64,073	0.90
1924 ..	5,200,184	84,241	120,599	66,007	8,303	74,310	0.89
1925 ..	6,754,682	93,124	126,032	58,840	8,077	66,917	0.87
1926 ..	7,189,448	98,573	140,318	62,442	7,040	69,482	0.98
1927 ..	7,945,357	126,222	173,707	81,728	7,200	88,928	1.07

(v) *Other Sewerage Systems.* Information in summarized form is given below regarding the two suburban sewerage systems, viz., the Glenelg system and the Port Adelaide and Semaphore system, for the years 1922–23 to 1926–27 :—

SUBURBAN SEWERAGE SYSTEMS, SOUTH AUSTRALIA.—SUMMARY, 1922-23 TO 1926-27.

Year ended 30th June—	Length of Sewers.	Number of Connexions.	Capital Cost.	Revenue.		Working Expenses.		Percentage of Net Revenue on Capital Cost.
				Rates.	Total.	Maintenance.	Total.	
	Miles.	No.	£	£	£	£	£	%
1923 ..	67	6,576	423,620	13,055	14,449	12,693	13,307	0.27
1924 ..	72	7,208	451,709	17,538	18,855	14,595	15,165	0.81
1925 ..	78	7,756	475,340	19,552	20,884	9,118	9,755	2.34
1926 ..	84	8,390	509,483	21,240	22,422	10,745	11,405	2.16
1927 ..	88	8,934	543,026	23,998	24,961	10,714	11,623	2.46

5. **Western Australia.**—(i) *General.* The water supply and sewerage systems of Western Australia are all under the management of Government Departments, and are divided into the following categories :—(*a*) Metropolitan Water Supply, Sewerage and Drainage, covering Perth, Fremantle, Claremont, Guildford, Midland Junction, and Armadale District, (*b*) Goldfields Water Supply, (*c*) Water Supply of other towns, (*d*) Agricultural Water Supply, (*e*) other Mines Water Supply, and (*f*) artesian and sub-artesian waters. The consumption of water by the railways is not included in figures for water supplied given hereunder

(ii) *Metropolitan Water Supply, Sewerage and Drainage.* (*a*) *General.* The sources of the metropolitan water supply are the Victoria Reservoir, Bickley Brook, Mundaring Reservoir, thirteen bores, and the Armadale, Churchman Brook, Canning River, and Wungong pipe head dams. The sewerage system consists of septic tanks and percolating filters for Perth, and septic tanks and ocean outfall for Fremantle and Subiaco. At the 30th June, 1927, the number of houses connected with sewers was 16,622.

(*b*) *Summary.* The following table gives particulars regarding water supply for the years 1923 to 1927 :—

WATER SUPPLY, WESTERN AUSTRALIA.—SUMMARY, 1923 TO 1927.

Year ended 30th June—	Estimated Population Supplied.	Number of Houses Supplied.	Water Supplied.	Average Daily Supply.		Number of Meters.	Length of Mains.
				Per Head.	Per House.		
	No.	No.	1,000Gallons.	Gallons.	Gallons.	No.	Miles.
1923	171,560	38,002	2,714,791	43.35	195.72	21,782	677
1924	174,580	39,386	3,089,825	48.36	214.93	22,114	700
1925	178,600	40,741	2,909,095	44.62	195.63	23,416	713
1926	184,000	42,302	3,131,144	46.63	202.79	24,750	760
1927	192,000	44,235	2,777,186	39.63	175.85	27,572	782

(*c*) *Finances.* The table hereunder gives separate information for the water supply and sewerage and drainage branches for the years 1923 to 1927 :—

WATER SUPPLY AND SEWERAGE AND DRAINAGE, WESTERN AUSTRALIA.—FINANCES, 1923 TO 1927.

Year ended 30th June—	Water Supply.			Sewerage and Drainage.		
	Capital Cost.	Revenue.	Expenditure.	Capital Cost.	Revenue.	Expenditure.
	£	£	£	£	£	£
1923	1,410,442	126,028	134.316	1,015,930	74,771	74,777
1924	1,722,594	135,250	152,824	1,055,612	83,388	76,532
1925	2,162,771	140,811	169,011	1,150,261	91,073	78,830
1926	2,553,179	149,176	188,235	1,243,217	96,600	80,165
1927	2,762,036	198,951	198,340	1,341,722	85,970	84,020

(iii) *Goldfields Water Supply.* The source of supply for the Coolgardie and adjacent goldfields, as well as for towns and districts on or near the pipe-line, is the Mundaring Reservoir, which has a capacity of 4,650 million gallons. There are three classes of consumers—the railways, the mines, and "other," and in 1926–27 the railways consumed 8 per cent., the mines 19 per cent., and "other" 73 per cent. of the supply. The following table gives details for the years 1923 to 1927 :—

GOLDFIELDS WATER SUPPLY, WESTERN AUSTRALIA.—SUMMARY, 1923 TO 1927.

Year ended 30th June—	Total Consumption.	Number of Services.	Length of Water Mains.	Capital Cost.	Revenue.	Expenditure.
	1,000 gallons.	No.	Miles.	£	£	£
1923	1,169,000	10,899	1,234	3,445,059	178,495	217,680
1924	1,159,000	10,628	1,303	3,487,887	167,597	212,713
1925	1,139,000	10,706	1,371	3,544,274	178,495	215,517
1926	1,161,000	10,676	1,454	3,642,059	179.402	218,956
1927	1,106,000	10,594	1,483	3,656,147	168,183	207,583

(iv) *Water Supply of Other Towns.* During the year 1926–27 there were 28 towns provided with water supplies, of which 16 are controlled by Water Boards and 12 by the Public Works Department. The total supplies to the latter towns for the year ending 30th June, 1927, were as follows :—Domestic, 85,000,000 gallons, and Railways, 22,000,000 gallons. The estimated population was 20,000, and the average daily domestic consumption was 12 gallons per head.

(v) *Agricultural Water Supply.* During the year 1926–27, 23 tanks were excavated, and 5 wells sunk, of which 3 yielded fresh water. During the 17 years from the 1st July, 1910, to the 30th June, 1927, 425 tanks were built, 322 wells sunk, and 2,700 bores put down to a total depth of 133,078 feet. Of the bores mentioned, 459 yielded fresh, and 245 stock-water.

(vi) *Artesian and Sub-artesian Waters.* Up to the 30th June, 1927, the total number of bores put down in search of artesian or sub-artesian water was 231, including 49 sunk in the metropolitan area, ranging in depth from 32 to 4,006 feet.

6. Tasmania.—(i) *Hobart Water Supply.* The cost of this undertaking to the 30th June, 1927, was £425,449, but a considerable amount of reticulation work has been done out of revenue and not charged to capital account. The outstanding loans at 30th June, 1927, amounted to £358,380. At the same date the number of tenements supplied in the city and suburbs was 10,283 and the length of reticulation mains 117¾ miles. The revenue for the years 1923 to 1927 was as follows :—

HOBART WATERWORKS.—REVENUE, 1923 TO 1927.

Heading.	1923.	1924.	1925.	1926.	1927.
	£	£	£	£	£
Revenue	35,494	34,965	34,935	39,527	37,153

(ii) *Hobart Sewerage System.* The revenue for the year ended 30th June, 1927, was £38,353. Up to that date 80½ miles of sewers had been laid in connexion with the original city system at a cost of £212,632, and 8,062 tenements connected. Since the original city was sewered, the Municipalities of Queenborough and New Town have been included in the city, and are now being sewered. In Queenborough 25¼ miles of sewers, connecting with 1,357 tenements, have been constructed at a cost of £118,911. In New Town a total of 30½ miles of sewers has been laid, and 1,240 properties connected. The cost to 30th June, 1927, including surveys and sewerage outfall, was £109,688.

§ 6. Harbour Boards and Trusts.

1. **New South Wales.**—(i) *Sydney Harbour Trust.* (*a*) *General.* The Sydney Harbour Trust, which consists of three Commissioners appointed by the Government, controls the whole of the wharves resumed by the Government in 1901. The Commissioners also provide and maintain the lighting and marking of the harbour, and carry out all necessary dredging. The whole of what might be termed city wharves is owned by the Commissioners and leased to various shipping companies, but the Trust directly operates and maintains a certain number of open wharves. Outside the city area the wharves are, to a large extent, privately controlled, but all structures beyond high-water mark are held under leases issued by the Trust. The extent of wharfage accommodation now available for use totals 65,243 lineal feet, inclusive of 9,804 lineal feet privately owned.

The depth of water at the entrance to the port is not less than 80 feet and in the channels there are 40 feet at low-water spring tides. The foreshores of Sydney Harbour are about 200 miles in length. The area of the water in the port is 14,284 acres, of which 3,000 acres have a depth ranging from 35 to 160 feet.

Since its inception, the Trust has spent £7,504,243 on the reconstruction and extension of the wharfage and improvements to the port and vested area. Over 13,027 lineal feet of old and obsolete wharfage have been demolished, and 32,515 lineal feet of new berths have been constructed. Other improvements include 2,910,000 square feet of floor area of new sheds and nearly 4 miles of new roadways.

During the year 1927, 1,741,395 tons of material were dredged at a cost of £97,510. In the process of towing such material, 44,944 miles were run at a cost of £36,601.

(*b*) *Finances.* The subjoined table gives particulars concerning the finances of the Trust for the years 1923 to 1927 :—

SYDNEY HARBOUR TRUST.—FINANCES, 1923 TO 1927.

Year ended 30th June.	Revenue.				Expenditure.	Total Capital Debt.	Interest.	Balance.
	Wharfage and Harbour Rates.	Tonnage Rates and Berthing Charges.	Other Sources.	Total.				
	£	£	£	£	£	£	£	£
1923 ..	517,740	39,570	294,931	852,241	253,614	10,129,113	514,756	83,871
1924 ..	553,295	44,879	299,183	897,357	276,883	10,417,859	528,743	91,731
1925 ..	587,157	58,735	324,510	970,402	283,040	10,644,468	526,944	160,418
1926 ..	618,075	53,143	344,660	1,015,878	298,101	10,956,555	554,446	163,330
1927 ..	674,311	54,935	354,610	1,083,856	320,033	11,299,989	569,884	193,939

2. **Victoria.**—(i) *Melbourne Harbour Trust.* (*a*) *General.* Information regarding the origin and constitution of this Trust will be found in Official Year Book No. 12, pp. 970 *et seq.* In 1927, the length of sheds in the port was 19,168 feet, covering an area of 1,108,824 square feet. The quantity of material raised by the dredging and excavation done in the improvement of the river and bay amounts to 86,079,287 cubic yards. The Trust has expended £339,596 in reclaiming land within its jurisdiction.

(*b*) *Finances.* The following table gives particulars of the revenue and expenditure of the Trust from 1923 to 1927 inclusive. Up to 31st December, 1927, the total capital expenditure amounted to £7,063,345.

MELBOURNE HARBOUR TRUST.—FINANCES, 1923 TO 1927.

Particulars.	1923.	1924.	1925.	1926.	1927.
REVENUE.					
	£	£	£	£	£
Rates, rents, etc.	681,958	711,558	712,733	739,460	799,075
Interest	328	669	285	79	43
Other receipts	9,850	17,095	23,213	20,394	20,549
Total	692,136	729,322	736,231	759,933	819,667
EXPENDITURE.					
	£	£	£	£	£
Management and general expenses	60,997	74,086	85,655	98,717	97,289
Interest	124,109	131,674	151,891	159,353	161,197
Total	185,106	205,760	237,546	258,070	258,486
Less standing charges added to works	37,272	43,749	48,128	49,309	55,588
Total	147,834	162,011	189,418	208,761	202,898
Wharfage and other refunds	5,728	4,879	3,761	3,683	2,623
Consolidated revenue of Victoria	135,520	140,382	136,494	143,002	148,282
Flotation of loans expenses	750	5	10	15	8
Maintenance	85,458	130,234	166,610	142,917	148,680
Total expenditure	375,290	437,511	496,293	498,378	502,491
Surplus on revenue account	316,846	291,811	239,938	261,555	317,176
Less depreciation and renewals account and sinking fund	213,000	213,000	213,000	213,000	213,000
Net surplus on revenue account	103,846	78,811	26,938	48,555	104,176
CAPITAL EXPENDITURE.					
Land and property	32,892	548	37,699	30,962	20,144
Deepening waterways	150,885	137,488	145,808	169,053	204,536
Wharves construction	67,360	194,318	285,072	129,382	246,587
Approaches construction	7,519	25,483	46,130	15,412	35,619
Other harbour improvements	8,719	23,826	18,631	40,416	15,735
Floating plant	632	3,192	97,354	9,221	125,690
General plant	2,025	3,440	2,718	4,891	5,045
Total	270,032	388,295	633,412	399,337	653,356

(ii) *Geelong Harbour Trust.* (*a*) *General.* The Geelong Harbour Trust was constituted in 1905, and is under the control of three Commissioners appointed by the Governor in Council. The Commissioners have vested in them the Port of Geelong, which includes that portion of Port Phillip east of a line from the right bank of Little River at its mouth south-easterly to a point in line with the east side of Mercer-street, Portarlington. This area comprises Corio Bay, Portarlington, and some miles of Bay frontage. In addition, certain lands abutting upon the River Barwon and Barwon River Heads are vested in the Commissioners and form part of the Port. The Commissioners have established facilities for the export of grain, frozen meat, and other produce, and have also constructed extensive abattoirs and freezing works. A large amount of money has been expended in the reclamation of waste lands, and on part of such lands a dairy farm with a complete system of drainage and irrigation has been established.

(*b*) *Finances.* The following table gives financial details for the years 1923 to 1927 :—

GEELONG HARBOUR TRUST.—FINANCES, 1923 TO 1927.

Year.	Loans.	Sinking Fund.	Revenue.	Expenditure.
	£	£	£	£
1923	591,000	33,045	58,680	56,065
1924	591,000	36,912	61,356	52,315
1925	591,000	41,167	70,730	57,027
1926	591,000	45,746	67,073	66,230
1927	599,716	47,658	65,631	99 948

(iii) *Harbour Boards.* The Harbor Boards Act of 1927 provides for the constitution of Harbour Boards for the following ports :—Gippsland Lakes ; Welshpool ; Warrnambool ; Port Fairy ; Portland. These ports have, hitherto, been under the control of the Department of Ports and Harbours of Victoria. The first board to be constituted under this Act is the Warrnambool Harbour Board. (See *Victoria Gazette*, 6th June, 1928, page 1595.)

3. **Queensland.**—(i) *Bowen Harbour Board.* (*a*) *General.* The Bowen Harbour Board consists of seven members, of whom two are appointed by the Governor in Council and the remainder elected by the electors of the Town of Bowen and adjacent shires. The district under its jurisdiction comprises the area within the boundaries of the Town of Bowen, the Shires of Proserpine and Wangaratta, and division I. of the Shire of Ayr.

(*b*) *Finances.* The capital expenditure to the 31st December, 1927, was £20,782, while for the year 1927 the receipts were £11,551 and the expenditure £20,785.

(ii) *Bundaberg Harbour Board.* (See Official Year Book No. 20, page 140.

(iii) *Cairns Harbour Board.* (*a*) *General.* The Cairns Harbour Board consists of twelve members, representing the city of Cairns and eight adjoining shires. The wharves at Cairns, which are all under the control of this Board, are of reinforced ferro-concrete, and are 1,500 feet in length, while an additional 400 feet are under construction. Mechanical sugar-handling conveyors have been installed at a cost of over £38,465. The wharves are electrically lighted and furnished with railways and crane services, including one 8-ton electric portal crane costing over £5,000 especially installed for handling sinker logs. There is a special railway wharf with facilities for handling floater logs. A cold storage plant has been built at a cost of £9,000.

(*b*) *Finances.* During the year 1927, the gross revenue of the Board was £57,677 11s. 8d., derived from harbour, berthage and miscellaneous dues, etc.

(iv) *Gladstone Harbour Board.* (*a*) *General.* The Gladstone Harbour Board is composed of seven members, two of whom are appointed by the Governor in Council and five elected by the electors of the town of Gladstone and the shires of Calliope and Miriam Vale. The works under the control of the Board are (i) Auckland Point Jetty and Wharf, constructed of reinforced concrete and wood, together within a two-way traffic approach and jetty for the handling of local cargo, the berth being 775 feet long, with an average depth alongside of 26 feet ; (ii) the municipal wharf in Auckland-street ; (iii) wool dumping plant on Auckland Point jetty, consisting of two hydraulic dumps, capable of doing either single or double dumping ; (iv) three large cargo sheds, each 140 feet by 30 feet ; (v) 15-ton electric crane for coal and timber.

(*b*) *Finances.* The total capital expenditure to the end of 1927 amounted to £91,420. The revenue for 1927 was £4,228, and the expenditure £4,668.

(v) *Mackay Harbour Board.* (*a*) *General.* The Mackay Harbour Board consists of nine members elected by the electors of the city of Mackay and the shires of Pioneer, Sarina, Mirani and Nebo. During the year 1927, the following works were carried out:—The director wall improvements in the Pioneer River were completed, i.e., the wall was raised from a half tide wall to above high water level. The north wall was repaired and extended to its original position. Plans and estimates for an outer harbour at Flat Top Island were prepared and submitted to the Treasurer. This matter is still under consideration.

(*b*) *Finances.* Capital expenditure for the year 1927 was £2,458 19s. 2d.; receipts for the year 1927 was £13,966 13s.; total expenditure amounted to £20,258 10s. 8d.

(vi) *Rockhampton Harbour Board.* (*a*) *General.* The Rockhampton Harbour Board consists of eleven members, of whom seven are elected by the electors on the rolls for the city of Rockhampton, the town of Mount Morgan and the shires of Fitzroy and Livingstone. The remaining four are elected by the councillors of groups of inland shires.

In the port of Rockhampton, which comprises the tidal area of the Fitzroy River as far as the entrance to Keppel Bay, there are three principal places where steamers may lie and discharge cargo, viz., (i) Rockhampton itself, (ii) Port Alma, where the oversea steamers berth, and (iii) Broadmount, originally built for the oversea trade some years ago. The wharves at these three places are connected by rail with Rockhampton and with the main central line. The Board undertakes the work of improving the navigable channels throughout the estuary and river, and of maintaining the wharves at Port Alma and Rockhampton.

(*b*) *Finances.* The revenue for the year 1927 was £33,067, of which £3,957 represented loans; and the expenditure was £35,705, which included £3,329 interest on loans and overdraft.

(vii) *Townsville Harbour Board.* (*a*) *General.* The Townsville Harbour Board is composed of nine members, of whom two are appointed by the Governor in Council, and the remaining seven are elected by the electors of Townsville and adjacent towns and shires. All harbour works and conveniences for the use of shipping are under the control of the Board.

(*b*) *Finances.* The total expenditure since the inception of the Board is £1,768,571, while the receipts for the year 1927 were £58,296 and the expenditure £65,295.

5. Western Australia.—(i) *Fremantle Harbour Trust.* (*a*) *General.* Fremantle Harbour is controlled by a Board of five Commissioners appointed by the Governor in Council. A description of the works was given in a previous Year Book (see No. 12, p. 973). Since that account was written, the inner harbour and entrance channel have been dredged to a depth of 36 feet below the lowest known low water. The berthage accommodation at all the quays has also been deepened to 36 feet.

(*b*) *Finances.* The following table gives financial data for the years 1923 to 1927:—

FREMANTLE HARBOUR TRUST.—FINANCES, 1923 TO 1927.

Year ended 30th June—	Revenue.	Expenditure.	Gross Amount Paid to the Treasury.				
			Interest.	Sinking Fund.	Renewals Fund.	Surplus Revenue.	Total.
	£	£	£	£	£	£	£
1923	282,015	120,086	83,386	20,764	2,000	47,272	153,422
1924	357,450	146,177	85,703	21,185	2,000	96,612	205,500
1925	421,255	171,391	87,783	21,564	2,000	130,776	242,123
1926	443,395	185,137	90,013	21,879	2,000	113,290	227,182
1927	499,936	223,441	94,094	22,545	2,000	142,245	260,884

(ii) *Bunbury Harbour Board.* (*a*) *General.* The Bunbury Harbour Board consists of five members, appointed by the Government. The jetty is 4,900 feet long, with berthage accommodation of 2,700 feet on the west side and 3,000 feet on the east side, and is electrically lighted. Vessels can load alongside to depths ranging from 16 to 27½ feet. Five electric cranes and one steam gantry crane, each of 3 tons lifting capacity, are available.

(*b*) *Finances.* Details for the last five years are given hereunder. Surplus revenue is paid into Consolidated Revenue Fund to meet interest and sinking fund :—

BUNBURY HARBOUR BOARD.—FINANCES, 1923 TO 1927.

Year ended 30th June—	Capital Expenditure.	Revenue.	Expenditure.	Paid to Consolidated Revenue Fund.
	£	£	£	£
1923	448,377	25,746	8,749	16,997
1924	450,000	33,836	10,707	23,129
1925	450,000	37,625	17,001	22,000
1926	450,000	36,229	27,364	20,100
1927	450,000	35,973	32,907	20,150

6. Tasmania.—(i) *Marine Board of Hobart.* (*a*) *General.* The Marine Board of Hobart consists of nine wardens elected by the ship-owners of the Port of Hobart and the importers and exporters of goods into or from any port within the jurisdiction of the Board. The Board has jurisdiction over all ports, harbours and waters within the limits of the coast line from South-West Cape round the southern and eastern coasts to Cape Portland, and within all islands adjacent to such coast line. The duties of the Board are to maintain all wharves within its jurisdiction which are not vested in another authority or belonging to any private person, to construct new wharves where necessary, and to improve the navigation where desirable.

(*b*) *Finances.* The following table gives details for the years 1923 to 1927 :—

MARINE BOARD OF HOBART.—FINANCES, 1923 TO 30th JUNE, 1927.

Year ended 30th June—	Capital Debt.	Revenue.			Expenditure.			
		Harbour Improvements, Debentures, etc.	General.	Total.	Harbour Improvements.	Interest and Sinking Fund.	General.	Total.
	£	£	£	£	£	£	£	£
1923 ..	90,350	..	32,620	32,620	373	6,511	25,670	32,554
1924 ..	86,806	2,456	37,465	39,921	15,787	6,180	20,304	42,271
1925 ..	86,302	300	38,764	39,064	4,192	6,220	25,644	36,056
1926 ..	78,526	..	39,223	39,223	625	6,208	27,211	*a* 41,150
1927 ..	66,820	..	40,830	40,830	1,407	5,566	23,012	*b* 40,985

(*a*) Including £7,106 from revenue in reduction of loans.
(*b*) Including £11,000 from revenue in reduction of loans.

(ii) *Marine Board of Launceston.* (*a*) *General.* The Marine Board of Launceston consists of five wardens, three elected by the ratepayers of the city of Launceston and two by ratepayers of the municipalities within the Tamar District. The jurisdiction of the Board extends from Cape Portland along the north coast of Tasmania to Badger Head. The chief work carried out has been to deepen the channel of the River Tamar to 16 feet and to maintain the wharves. An important work completed in 1923 was the removal to a depth of 30 feet of Porpoise Rock, situated 4 miles from the entrance of the port. A deepwater port has been provided at Bell Bay with a depth of 40 to 45 feet alongside. The wharfage accommodation at Launceston exceeds 2,000 feet.

(*b*) *Finances.* The following table gives details for the years 1923 to 1927:—

MARINE BOARD OF LAUNCESTON.—FINANCES, 1923 TO 1927.

Year.	Total Capital Debt.	Capital Debt, Tamar Improvement.	Revenue.	Expenditure.
	£	£	£	£
1923	318,361	282,710	49,928	47,588
1924	330,713	283,475	53,672	46,044
1925	329,733	302,494	48,345	47,304
1926	348,851	321,612	57,320	53,397
1927	362,163	334,924	56,163	56,245

(iii) *Marine Board of Burnie.* The length of the breakwater is 1,250 feet, with a depth up to 42 feet at low water, and a wharf alongside, 630 feet in length by 91 feet wide, with a depth at low water from 24 to 40 feet. There are two other timber wharves, 600 feet and 400 feet long respectively. The receipts for the year ending 30th June, 1927, were £20,323, and the expenditure £19,772, including £11,000 interest on loans.

§ 7. Fire Brigades.

1. New South Wales.—(i) *General.* Under the Fire Brigades Act of 1909-27, a Board of Fire Commissioners consisting of eight members was formed, and fire districts constituted. The cost of maintenance of fire brigades is borne in proportions of quarter, quarter, and half by the Government, the municipalities, and the insurance companies concerned, but the expenditure must be so regulated that the proportion payable by the councils in a fire district shall not exceed the amount obtainable from ½d. in the £ rate on the unimproved capital value of the district.

(ii) *Sydney Fire District.* (*a*) *Plant, etc.* The Sydney fire district includes the City of Sydney and suburbs, comprising a total area of 246 square miles. On the 31st December, 1927, the Board had under its control in this district 76 stations, 503 permanent men, 258 partially-paid firemen, 2 steam and 74 motor fire engines, 160,000 feet of hose, and 639 telephone fire alarms. The length of wire used for telephone lines was 1,876 miles. There are in operation 285 sprinkler installations, 4 watchman's clock systems, and 229 private fire alarms.

(*b*) *Finances.* The subjoined table shows the receipts and disbursements of the Board for the past five years in respect of the Sydney Fire District:—

SYDNEY FIRE DISTRICT.—FINANCES, 1923 TO 1927.

Year.	Receipts.						Disbursements.
	From Government.	From Municipalities.	From Fire Insurance Companies.	From Firms.	From other Sources.	Total.	
	£	£	£	£	£	£	£
1923	58,153	58,153	57,551	602	5,954	180,413	178,585
1924	60,768	60,768	60,183	584	5,401	187,704	186,159
1925	60,768	60,768	60,093	675	5,154	187,458	196,672
1926	72,676	72,676	71,807	869	6,293	224,321	223,568
1927	59,193	59,193	116,226	2,160	7,311	244,083	240,072

2. Victoria.—(i) *General.* The Fire Brigades Act of 1915 provides for a Metropolitan Fire Brigades Board, and a Country Fire Brigades Board, each consisting of nine members, with local committees in country districts. The income of each Board is derived in equal proportions from the Treasury, the municipalities, and insurance companies.

(ii) *Metropolitan Fire Brigade Board.* (*a*) *Plant, etc.* On the 30th June, 1927, the Board had under its control 40 stations, 281 permanent men, 165 partially-paid firemen, 75 special service firemen, 1 motor-drawn steam fire engine, 7 petrol motor fire engines, 27 combination hose carriages and pumps, 4 petrol motor combination appliances, 2 petrol motor salvage vans, 3 special service vans, 4 motor cycles, 21 petrol motor hose waggons, 1 petrol delivery waggon, 3 motor lorries, 1 chief officer's car, 1 deputy chief officer's car, 9 inspection and instructional cars, 16 hand hose reels, 3 extension ladders and fire escapes, 4 Pompier ladders, 43 hand pumps, 12 smoke helmets, 1 smoke jacket, 104,000 feet of hose.

The electrical equipment of the brigade now consists of 1,437 fire alarm call boxes, of which 358 are directly connected to public and other buildings, together with 1,203 auxiliary fire alarms, and the remaining 1,079 are street alarms. The number of street fire alarm circuits is 247. In addition there are 245 sprinkler alarm installations connected by 132 circuits directly to the Brigade, and 31 buildings are protected by automatic fire alarm circuits. The total number of watchman's recording and detector clocks installed in Melbourne is now 107.

(*b*) *Finances.* The following table gives particulars for each year from 1922–23 to 1926–27 inclusive :—

METROPOLITAN FIRE BRIGADES BOARD, VICTORIA.—FINANCES, 1923 TO 1927.

Particulars.	1923.	1924.	1925.	1926.	1927.
RECEIPTS.					
	£	£	£	£	£
Contributions	122,700	131,739	151,322	157,872	170,127
Receipts for services ..	14,028	16,486	20,138	21,180	24,224
Interest and Sundries ..	6,898	9,811	11,642	16,575	15,276
Total	143,626	158,036	183,102	195,627	209,627
EXPENDITURE.					
Salaries	93,033	85,477	100,651	104,215	108,787
Interest and sinking fund ..	10,219	10,821	11,682	12,982	15,210
Other expenditure ..	43,515	59,172	68,880	80,277	60,643
Total	146,767	155,470	181,213	197,474	184,640

(iii) *Country Fire Brigades Board.* (*a*) *Plant, etc.* At 30th June, 1927, there were 116 municipal councils and 99 insurance companies included in the operations of the Act. The brigades are composed chiefly of volunteers, but in the large centres a few permanent station-keepers and partially-paid firemen are employed. Complete fire alarm systems are installed in 27 of the larger provincial cities and townships. There were 144 registered brigades and 2,528 registered firemen at 30th June, 1927. The equipment included 23 motor pumps, 27 motor tenders, 2 steam fire engines, and numerous manual engines and hose reels.

(*b*) *Revenue and Expenditure.* Revenue and expenditure for the years 1923 to 1927 (30th June) are given below :—

COUNTRY FIRE BRIGADES BOARD, VICTORIA.—REVENUE AND EXPENDITURE, 1923 TO 1927.

Particulars.	1923.	1924 (Six Months to 30th June).	Year ended 30th June, 1925.	Year ended 30th June, 1926.	Year ended 30th June, 1927.
	£	£	£	£	£
Revenue	22,088	16,907	25,133	30,154	31,139
Expenditure	22,813	16,432	23,684	31,113	29,948

3. **Queensland.**—(i) *General.* The Act of 1920 made provision for the retention of existing fire districts, and for the constitution of new districts. For each district there must be a Fire Brigades Board consisting of seven members, and the cost of maintenance of each brigade is proportioned as follows :—The Treasurer two-sevenths, insurance companies three-sevenths, and local authorities two-sevenths. All volunteer fire brigades must be registered.

(ii) *Fire Brigades Boards.* (*a*) *Plant, etc.* At the end of the year 1926 there were fire brigades in 30 towns, with a total strength of 141 permanent men, 264 partly paid, and 113 volunteers. The plant included 44 motor, 3 steam, and 7 manual fire engines, 57 hose reels, consisting of 22 motor, 3 horse, and 32 hand reels, and 106,855 feet of hose. The total number of call points was 616. The Metropolitan Fire Brigade protects an area of 32 square miles and has a staff of 149 men. There are 94 fire alarm circuits, 310 street fire alarms, 18 private coded alarms not available to public, 52 automatic thermostats, 51 sprinkler installations, 13 push button alarms, and 6 direct telephone alarms.

(*b*) *Revenue and Expenditure.* The following table gives details for the years 1922 to 1926 :—

FIRE BRIGADE BOARDS, QUEENSLAND.—REVENUE AND EXPENDITURE, 1922 TO 1926.

Year.	Revenue.				Expenditure.			
	From Government.	From Local Authorities.	From Insurance Companies.	Total.	Salaries and Wages.	Buildings, Repairs, etc.	Plant, Stores, etc.	Total.
	£	£	£	£	£	£	£	£
1922 ..	14,711	14,996	22,976	53,647	34,340	3,687	8,444	56,071
1923 ..	16,054	15,094	22,455	64,190	35,803	12,336	10,166	64,597
1924 ..	17,140	16,347	24,489	61,212	40,032	3,344	10,081	65,183
1925 ..	18,485	18,597	27,928	73,295	41,280	3,970	11,461	71,330
1926 ..	19,454	19,196	30,289	93,657	47,283	25,828	11,047	97,032

4. **South Australia.**—(i) *General.* The Fire Brigades Act of 1913 and amendments provides for a Board of five members, and the expenses and maintenance of brigades are defrayed as to two-ninths by the Treasury, five-ninths by insurance companies, and two-ninths by the municipalities concerned.

(ii) *Fire Brigades Board.* (*a*) *Plant, etc.* At the end of 1927 there were altogether 24 fire brigade stations. The strength of the brigades consists of 107 permanent firemen and 87 auxiliary firemen. The plant consists of 1 steam fire engine, 11 motor engines, 17 motor hose carriages, 55,150 feet of hose, one 90-ft. turntable escape ladder, 2 telescopic curricle ladders, 2 fire escapes and petrol-driven fire float. There are 331 fire alarm circuits, 15 automatic systems, and 36 sprinkler installations.

(*b*) *Revenue and Expenditure.* The following table shows the revenue of the Board for the years 1923 to 1927, the expenditure in each year being the same :—

FIRE BRIGADES BOARD, SOUTH AUSTRALIA.—REVENUE, 1923 TO 1927.

Heading.	1923.	1924.	1925.	1926.	1927.
	£	£	£	£	£
Revenue	35,071	38,173	47,103	52,276	50,309

5. **Western Australia.**—(i) *General.* Under the 1916 Act every municipal or road board district is constituted a fire district under the control of the Western Australian Fire Brigades Board. The income of the Board is derived as to two-eighths from Government, three-eighths from municipalities, and three-eighths from insurance companies.

(ii) *Western Australian Fire Brigades Board.* (*a*) *Plant, etc.* The whole of the brigades throughout the State are now controlled by the Western Australian Fire Brigades Board, and number 40. The staff at the 30th September, 1927, included a chief officer, deputy chief officer, third officer, district officer, motor engineeer, electrical engineer, 12 other officers, 102 permanent, 16 partially-paid, and 504 volunteer firemen. The plant comprised 5 steam, 12 motor and 4 manual engines, 19 motor hose carriages, 37 reels, and 75,200 feet of hose. There are 355 private fire alarm circuits, 539 street fire alarms, 4 automatic systems, and 29 sprinkler installations.

(*b*) *Finances.* The following table gives details for the years 1923 to 1927 :—

WESTERN AUSTRALIAN FIRE BRIGADES BOARD.—FINANCES, 1923 TO 1927.

Year ended 31st December—	Revenue.	Expenditure.	Estimated Value.	
			Land and Buildings.	Plant.
	£	£	£	£
1923	35,553	35,463	46,000	28,000
1924	38,720	38,621	48,650	28,000
1925	50,341	46,539	60,440	29,590
1926	(*a*)36,314	(*a*)37,990	65,700	32,200
1926–27 (*b*)	50,468	50,997	66,000	33,000

(*a*) Nine months only. (*b*) 1st October, 1926, to 30th September, 1927.

6. **Tasmania.**—(i) *General.* The municipal council of any municipality may, under the Act of 1920, petition the Governor to proclaim the municipality or any portion of it to be a fire district, each district to have a Board of five members. The expenses of each Board are borne in equal proportions by contributions from the Treasurer, the municipality concerned, and insurance companies insuring property within the district.

(ii) *Hobart Fire Brigade Board.* (*a*) *Plant, etc.* At the end of 1927 the staff consisted of 13 permanent and 15 partially-paid firemen. There were at that date also 2 motor pumps, 1 extension and 1 curricle ladder, two motor hose carriages, 3 horse and 4 hand reels, 2 Pompier ladders, and 10,750 feet of hose. There are 24 fire alarm circuits, 60 street alarms, 15 auxiliary boxes, 3 automatic systems, and 3 sprinkler installations.

(*b*) *Revenue and Expenditure.* The revenue for the years 1926 and 1927 amounted to £6,401 and £6,440 respectively, expenditure being the same.

CHAPTER V.

LAND TENURE AND SETTLEMENT.

§ 1. Introduction.

1. **General.**—A comprehensive description of the land tenure systems of the several States was given in Official Year Book No. 4 (pp. 235 to 333), while later alterations were referred to in subsequent issues. In this chapter a summary is given of the principal features of existing land legislation together with some account of the various tenures under which Crown lands may be taken up at the present time. Special paragraphs are devoted to the settlement of returned soldiers on the land, the tenure of land by aliens, and advances to settlers. Particulars as to the areas of land alienated in each State and similar matter are also included.

2. **State Land Legislation.**—The legislation in force relating to Crown lands, Closer Settlement, Returned Soldiers' Settlement, and other matters dealt with in this chapter is summarized in the following conspectus :—

STATE LAND LEGISLATION.

New South Wales.	Victoria.	Queensland.
CROWN LANDS ACTS.		
Crown Lands Act 1913–1927 : Western Lands Act 1901–1927 : Crown Lands Purchase Validation Act 1923. Crown Lands Amendment (Disposal) Act 1923. Crown Lands and Closer Settlement (Amending) Act 1924.	Land Act 1915–1923.	Land Acts 1910–1927. Upper Burnett and Callide Land Settlement Act 1923. Prickly-pear Land Acts 1923–1926. Sugar Workers' Perpetual Lease Selections Act 1923.
CLOSER SETTLEMENT ACTS.		
Closer Settlement Act 1904–1919 : Closer Settlement Purchases Validation Act 1923. Closer Settlement and Returned Soldiers' Settlement (Amendment) Act 1927.	Closer Settlement Act 1915–1925.	Closer Settlement Act 1906–1925.
MINING ACTS.		
Mining Act 1906–1924 : Mining Leases (Validation) Act 1924.	Mines Act 1915–1921.	Mining Acts 1898–1927 : Mining for Coal and Mineral Oil Act 1912 : Petroleum Acts 1923–1927 : Miners' Homestead Perpetual Leases Act 1913–1921 : Coal Mining Act 1925.
SOLDIERS' SETTLEMENT ACTS.		
Returned Soldiers' Settlement Act 1916–1925.	Discharged Soldiers' Settlement Act 1917–1925.	Discharged Soldiers' Settlement Act 1917–1926.
ADVANCES TO SETTLERS ACTS.		
Government Savings Bank Act 1906–1923 : Returned Soldiers' Settlement Act 1916–1925.	State Savings Bank Act 1915–1922 : Primary Products Advances Act 1919–1922 : Closer Settlement Act 1915–1925 : Fruit Act 1915–1920 : Discharged Soldiers' Settlement Act 1917–1925.	State Advances Act 1916 : Co-operative Agricultural Products and Advances to Farmers Act 1914–1919 : Agricultural Bank Act 1923.

3. North Australia and Central Australia Land Legislation.—In the Territories of North Australia and Central Australia, the legislation relating to Crown lands is embodied in the Crown Lands Ordinance 1927; that relating to mining in the Northern Territory Mining Act 1903, the Gold Dredging Act 1899, the Tin Dredging Ordinance 1911–1920, the Mineral Oil and Coal Ordinance 1922–1923, and the Encouragement of Mining Ordinance 1913–1926; and that relating to Advances to Settlers in the Wire and Wire Netting Act 1927, and the Encouragement of Primary Production Ordinance 1927.

4. Federal Capital Territory Land Legislation.—In the Federal Capital Territory, the Ordinances relating to Crown lands are the Leases Ordinance 1918–1926, the Recreation Land Leases Ordinance 1923, the City Area Leases Ordinance 1924–26, the Church Lands Leases Ordinance 1924–1927, and the Leases (Special Purposes) Ordinance 1925–1927.

STATE LAND LEGISLATION—*continued.*

South Australia.	Western Australia.	Tasmania
	CROWN LANDS ACTS.	
Crown Lands Act 1915–1927: Pastoral Act 1904–1926.	Land Act 1898–1926.	Crown Lands Act 1911–1924.
	CLOSER SETTLEMENT ACTS.	
Crown Lands Act 1915–1927.	Agricultural Lands Purchase Act 1909–1922; Closer Settlement Act 1927.	Closer Settlement Act 1913–1924.
	MINING ACTS.	
Mining Act 1893–1922: Gold Dredging Act 1905: Mining on Private Property Act 1909–1916.	Mining Act 1904–1923: Sluicing and Dredging for Gold Act 1899.	Mining Act 1917–1924: Aid to Mining Act 1924.
	RETURNED SOLDIERS' SETTLEMENT ACTS.	
Discharged Soldiers' Settlement Act 1917–1925.	Discharged Soldiers' Settlement Act 1918–1919.	Returned Soldiers' Settlement Act 1916–1923.
	ADVANCES TO SETTLERS ACTS.	
Irrigation Act 1922–1927: Pastoral Act 1904–1925: Discharged Soldiers' Settlement Act 1917–1925.	Agricultural Bank Act 1906–1924.	State Advances Act 1907–1927: Advances to Fruit-growers Act 1918–1921: Closer Settlement Act 1913–1924: Returned Soldiers' Settlement Act 1916–1923.

5. Administration and Classification of Crown Lands.—In each of the States there is a Lands Department under the direction of a responsible Cabinet Minister who is charged generally with the administration of the Acts relating to the alienation, occupation and management of Crown lands. The administrative functions of most of the Lands Departments are to some extent decentralized by the division of the States into what are usually termed Land Districts, in each of which there is a Lands Office, under the management of a lands officer, who deals with applications for selections and other matters generally appertaining to the administration of the Acts within the particular district. In some of the States there is also a local Land Board or a Commissioner for each district or group of districts. In the Northern Territory the North Australia Commission is charged with the general administration of the Lands Ordinance and of Crown lands in the Northern Territory. In the Federal Capital Territory the administration of the Leases Ordinances is in the hands of the Federal Capital Commission.

Crown lands are generally classified according to their situation, the suitability of the soil for particular purposes, and the prevailing climatic and other conditions. The modes of tenure under the Acts, therefore, as well as the amount of purchase money or rent, and the conditions as to improvements and residence, vary considerably. The administration of special Acts relating to Crown lands is in some cases in the hands of a Board under the general supervision of the Minister, e.g., the Western Lands Board in New South Wales, the Lands Purchase and Management Board in Victoria, and the Closer Settlement Board in Tasmania.

In each of the States and in the Northern Territory there is also a Mines Department which is empowered under the several Acts relating to mining to grant leases and licences of Crown Lands for mining and auxiliary purposes.

6. Classification of Tenures.—The tabular statement which follows shows the several tenures under which Crown lands may be acquired or occupied in each State. In the Northern Territory perpetual leases of pastoral and agricultural land are granted, as well as miscellaneous leases, and grazing and occupation licences. The mining leases and holdings are, generally speaking, similar to those of the States. In the Federal Capital Territory only city leases and leases of other lands are issued.

STATE CROWN LANDS—TENURES.

New South Wales.	Victoria.	Queensland.
FREE GRANTS, RESERVATIONS AND DEDICATIONS.		
Free Grants : Reservations.	Free Grants : Reservations.	Free Grants : Reservations.
UNCONDITIONAL PURCHASES OF FREEHOLD.		
Auction Sales : After-auction Purchases : Special Purchases : Improvement Purchases.	Auction Sales.	
CONDITIONAL PURCHASES OF FREEHOLD.		
Residential Conditional Purchases : Non-residential Conditional Purchases : Additional Conditional Purchases : Conversions of various Leasehold Tenures into Conditional Purchases : Purchases of Town Leases : Suburban Holdings : Returned Soldiers' Special Holdings : Residential Leases : Week-end Leases.	Residential Selection Purchase Leases : Non-residential Selection Purchase Leases : Licences of Auriferous worked-out Lands : Conditional Purchase Leases of Swamp or Reclaimed Lands : Selection Purchase Leases of Mallee Lands : Murray River Settlements : Special Settlement Areas : Conversions into Selection Purchase Leases.	

STATE CROWN LANDS—TENURES—*continued.*

Leases and Licences under Land Acts.

New South Wales.	Victoria.	Queensland.
Conditional Leases : Conditional Purchase Leases : Special Conditional Purchase Leases : Homestead Selections : Homestead Farms : Settlement Leases : Special Leases : Annual Leases : Scrub Leases : Snow Leases : Inferior Lands Leases : Crown Leases : Improvement Leases and Leases under Improvement Conditions : Occupation Licences : Leases of Town Lands : Suburban Holdings : Week-end Leases : Residential Leases : Leases in Irrigation Areas : Western Lands Leases : Forest Leases : Forest Permits.	Perpetual Leases : Auriferous Lands Licences : Leases of Swamp or Reclaimed Lands : Perpetual Leases of Swamp or Reclaimed Lands : Grazing Licences : Perpetual Leases (Mallee) : Miscellaneous Leases and Licences : Bee Farm Licences : Bee Range Area Licences : Eucalyptus Oil Licences : Forest Leases : Forest Licences : Forest Townships.	Perpetual Lease Selections : Perpetual Lease Prickly-pear Selections : Pastoral Leases : Preferential Pastoral Leases : Prickly-pear Leases : Occupation Licences : Special Leases : Grazing Selections : Auction Perpetual Leases : Pastoral Development Leases.

Closer Settlement.

New South Wales.	Victoria.	Queensland.
Sales by Auction and Tender : After-auction Sales and Tenders : Settlement Purchases.	Sales of Land : Conditional Purchase Leases : Conditional Purchase Leases in Mountainous Areas.	Perpetual Lease Selections : Settlement Farm Leases : Perpetual Town, Suburban and Country Leases.

Leases and Licences under Mining Acts.

New South Wales.	Victoria.	Queensland.
Holdings under Miners' Rights : Gold Mining Leases : Mineral Leases : Coal and Oil Mining Leases : Business Licences : Residence Areas.	Holdings under Miners' Rights : Gold Mining Leases : Mineral Leases : Business Areas : Residence Areas.	Holdings under Miners' Rights : Permits to Prospect for Petroleum : Petroleum Leases : Licences to Prospect for Coal and Mineral Oil : Gold Mining Leases : Mineral Leases : Business Areas : Residence Areas : Miners' Homestead Perpetual Leases.

Settlement of Discharged Soldiers and Sailors.

New South Wales.	Victoria.	Queensland.
Soldiers' Group Purchases : Returned Soldiers' Special Holding Leases : Returned Soldiers' Special Holding Purchases : also Purchases and Leases under Crown Lands Act of lands set apart for application by discharged soldiers exclusively.	(Same Tenures as under the Land and Closer Settlement Acts.)	Perpetual Lease Selections : Perpetual Town and Suburban Leases.

STATE CROWN LANDS—TENURES—*continued.*

South Australia.	Western Australia.	Tasmania.
FREE GRANTS, RESERVATIONS, AND DEDICATIONS.		
Free Grants : Reservations.	Free Grants : Reservations.	Free Grants : Reservations.
UNCONDITIONAL PURCHASES OF FREEHOLD.		
Auction Sales.	Auction Sales.	Auction Sales : After-auction Sales : Sales of Land in Mining Towns.
CONDITIONAL PURCHASES OF FREEHOLD.		
Agreements to Purchase: Special Agreements to Purchase (40 years' term) : Homestead Blocks.	Conditional Purchases with Residence : Conditional Purchases without Residence : Conditional Purchases by Direct Payment : Conditional Purchases of Land for Vineyards, etc. : Conditional Purchases of Inferior Lands : Conditional Purchases by Pastoral Lessees : Conditional Purchases of Grazing Lands : Homestead Farms : Village Allotments : Workingmen's Blocks : Special Settlement Leases.	Selections for Purchase : Additional Selections for Purchase: Homestead Areas : Selections in Mining Areas : Sales by Auction : Sales by Private Contract : After-auction Sales : Special Settlement Areas.
LEASES AND LICENCES UNDER LAND ACTS.		
Perpetual Leases : Special Perpetual Leases (Free Period) : Perpetual Leases of Homestead Blocks : Miscellaneous Leases : Grazing and Cultivation Leases : Licences : Licences of Resumed Land : Pastoral Leases : Leases to Discoverers of Pastoral Country : Special Leases to Discoverers of Water : Irrigation Blocks : Town Allotments in Irrigation Areas : Forest Leases.	Pastoral Leases : Special Leases : Residential Leases : Leases of Town and Suburban Lands : Irrigation Leases.	Grazing Leases : Pastoral Leases. Leases of Land covered with Button Grass, etc. : Leases of Mountainous Land : Miscellaneous Leases : Temporary Licences : Occupation Licences : Residence Licences : Business Licences : Forest Leases, Licences and Permits.
CLOSER SETTLEMENT.		
Sales by Auction : Agreements to Purchase : Miscellaneous Leases.	Conditional Purchases : Town and Suburban Areas.	Leases with Right of Purchase : Special Sales.
LEASES AND LICENCES UNDER MINING ACTS.		
Holdings under Miners' Rights : Search Licences : Occupation Licences : Gold Leases : Mineral Leases : Business Areas : Residence Areas.	Holdings under Miners' Rights : Gold Mining Leases : Mineral Leases : Business Areas : Residence Areas : Miners' Homestead Leases.	Holdings under Miners' Rights : Prospectors' Licences : Gold Mining Leases : Mineral Leases.
SETTLEMENT OF DISCHARGED SOLDIERS AND SAILORS.		
Perpetual Leases : Pastoral Leases : Agreements to Purchase.	Ordinary Tenure : Special Tenure	Free Grants. Ordinary Tenure : Special Tenure

§ 2. Free Grants, Reservations, and Dedications.

1. New South Wales.—(i) *Free Grants.* Crown lands may, by notification in the *Gazette*, be dedicated for public purposes and be granted therefor in fee-simple. Such lands may be placed under the care and management of trustees, not less than three in number, appointed by the Minister.

(ii) *Reservations.* Temporary reservations of Crown lands from sale or lease may be made by the Minister.

(iii) *Areas Granted and Reserved.* During the year 1926–27, the total area for which free grants were prepared was 2,050 acres, including grants of 1,484 acres of land resumed under the 12th clause of the Public Roads Act 1902. During the same period 3,567 acres were dedicated and permanently reserved, the number of separate dedications being 137.

On the 30th June, 1927, the total area reserved, including temporary reserves, was 18,027,637 acres, of which 5,315,613 acres were for travelling stock, 2,579,974 acres for forest reserves, 683,093 acres for water, 1,180,530 acres for mining, and the remainder for temporary commons, railways, recreation reserves and parks, reserves for aborigines, and miscellaneous purposes.

2. Victoria.—(i) *Free Grants.* The Governor may grant, convey or otherwise dispose of Crown lands for public purposes.

(ii) *Reservations.* The Governor may temporarily or permanently reserve from sale, lease or license any Crown lands required for public purposes, and may except any area of Crown lands from occupation for mining purposes or for residence or business under any miner's right or business licence.

(iii) *Areas Granted and Reserved.* During the year 1926, 1,685 acres were granted without purchase, and reservations of both a permanent and temporary nature, comprising a net area of 7,654 acres, were made. At the end of 1926, the total area reserved was 7,564,410 acres, consisting of roads, 1,794,218 acres; water reserves, 314,397 acres; agricultural colleges, etc., 85,894 acres; permanent forests and timber reserves under Forests Act, 4,305,581 acres; forests and timber reserves under Land Acts, 329,385 acres; reserves in the Mallee, 406,810 acres; and other reserves, 328,095 acres.

3. Queensland.—(i) *Free Grants.* The Governor may grant in trust any Crown land, which is or may be required for public purposes. Under the Irrigation Act land to be used for the purpose of any undertaking under that Act may be vested in fee-simple in the Irrigation Commission.

(ii) *Reservations.* The Governor may reserve from sale or lease, either temporarily or permanently, any Crown land which is or may be required for public purposes. Reserved lands may be placed under the control of trustees who are empowered to lease the same for not more than 21 years with the approval of the Minister.

Under the State Forests and National Parks Act, the Governor may permanently reserve any Crown lands and declare them to be a State Forest or a National Park.

(iii) *Areas Granted and Reserved.* During the year 1927 the area of reserves cancelled was 19,701 acres more than the area set apart as reserves. The total area reserved up to the end of 1927 was 17,602,941 acres, made up as follows:—timber reserves, 3,260,576 acres; State forests and national parks, 1,956,148 acres; for use of aborigines, 6,153,268 acres; and general, 6,232,949 acres.

4. South Australia.—(i) *Free Grants.* The Governor may dedicate Crown lands for any public purpose and grant the fee-simple of such lands, with the exception of foreshores and land for quays, wharves or landing-places, which are inalienable in fee-simple from the Crown.

(ii) *Reservations.* The Governor may reserve Crown lands for (*a*) the use and benefit of aborigines, (*b*) military defence, (*c*) forest reserves, (*d*) railway stations, (*e*) park lands, or (*f*) any other purpose that he may think fit.

(iii) *Areas Granted and Reserved.* During the year 1927 free grants were issued for a total area of 16 acres. During the same year reserves comprising 11,757 acres were proclaimed. At the 30th June, 1927, the total area reserved was 16,311,882 acres.

5. Western Australia.—(i) *Free Grants.* The Governor may dispose of, in such manner as for the public interest may seem best, any lands vested in the Crown for public purposes, and may grant the fee-simple of any reserve to secure the use thereof for the purpose for which such reserve was made.

(ii) *Reservations.* The Governor may reserve any lands vested in the Crown for public purposes. Areas not immediately required may be leased from year to year. Reserves may be placed under the control of a local authority or trustees, with power to lease them for a period not exceeding 21 years, or may be leased for 99 years. Temporary reserves may also be proclaimed.

(iii) *Areas Granted or Reserved.* During the year 1927, a few small areas of land were granted in fee-simple, and 871,220 acres were reserved for various purposes.

6. Tasmania.—(i) *Free Grants.* The only mention in the Crown Lands Act respecting free grants of land is that the Governor may agree with the Governor-General of the Commonwealth for the grant of any Crown land to the Commonwealth, and it is expressly stated that no lands may be disposed of as sites for religious purposes except by way of sale under the Act. Under the Returned Soldiers Settlement Act of 1916, returned soldiers who applied prior to 31st March, 1922, are eligible to receive free grants of Crown land not exceeding £100 each in value, but these grants are conditional on the land being adequately improved.

(ii) *Reservations.* The Governor in Council may except from sale or lease, and reserve to His Majesty any Crown land for public purposes, and vest for such term as he thinks fit any land so reserved in any person or corporate body. Any breach or non-fulfilment of the conditions upon which such land is reserved renders it liable to forfeiture. A school allotment, not exceeding 5 acres in area, may also be reserved.

(iii) *Areas Granted or Reserved.* During the year ended 31st December, 1926, the area granted free was 400 acres, nearly all of which was granted to soldiers under the Returned Soldiers' Settlement Act, while during the same year, free leases were issued to 8 local bodies for municipal purposes, and 50,409 acres were reserved, of which 49,650 acres were for forest reserves, 28 acres for recreation purposes, 1 acre for a gravel reserve, 1 acre for hall site purposes, 17 acres for cemetery purposes, 685 acres for water reserve purposes, 5 acres for public pound purposes, and 22 acres for a stock reserve. The total area reserved to the end of 1926 was 5,039,099 acres.

7. North Australia and Central Australia.—(i) *Reservations.* The Governor-General may resume for public purposes any Crown lands, not subject to any right of or contract for purchase, and may reserve, for the purpose for which they are resumed, the whole or any portion of the land so resumed.

(ii) *Areas Reserved.* The area of land held under reserve at the 30th June, 1927, was—North Australia, 7,990 square miles, and Central Australia, 21,875 square miles.

§ 3. Unconditional Purchases of Freehold.

1. New South Wales.—(i) *Auction Purchases.* Crown lands, not exceeding in the aggregate 200,000 acres in any one year, may be sold by public auction in areas not exceeding half-an-acre for town lands, 20 acres for suburban lands, and 640 acres for country lands, at the minimum upset price of £8, £2 10s., and 15s. per acre respectively. At least 10 per cent. of the purchase-money must be paid at the time of sale, and the balance within 3 months, or the Minister may allow the payment of such balance to be deferred for a period not exceeding 10 years, 5 per cent. interest being charged. Town blocks in irrigation areas may also be sold by auction.

(ii) *After-auction Purchases.* In certain cases, land offered at auction and not sold may be purchased at the upset price, but one-quarter of the purchase-money must be paid as deposit with the application, and the balance as notified in the *Gazette.* Any such application is, however, subject to the approval of the Minister.

(iii) *Special Purchases.* Under certain circumstances, land may be sold in fee-simple, the purchaser paying the cost of survey and of reports thereon, in addition to the purchase-money. The minimum upset price per acre is the same as in the case of land sold by auction.

(iv) *Improvement Purchases.* The owner of improvements in authorized occupation by residence, under any Mining or Western Lands Act of land within a gold field or mineral field, may purchase such land without competition at a price determined by the local Land Board, but at not less than £8 per acre for town lands or £2 10s. per acre for other lands. The area must not exceed ¼ acre within a town or village, or 2 acres elsewhere, and no person may purchase more than one such area within 3 miles of a similar prior purchase by him.

2. **Victoria.**—(i) *General.* Lands specially classed for sale by auction may be sold by auction in fee-simple, not exceeding 100,000 acres in any one year, at an upset price of £1 an acre, or at any higher price determined. The purchaser must pay the survey fee at the time of the sale, together with a deposit of 12½ per cent. of the whole price; the residue is payable in equal half-yearly instalments with interest. Any unsold land in a city, town or borough, areas specially classed for sale, isolated pieces of land not exceeding 50 acres in area, and sites for churches or charitable purposes, if not more than 3 acres in extent, may be sold by auction on the same terms. Swamp or reclaimed lands may also be sold by auction, subject to the condition that the owner keeps open all drains, etc., thereon.

(ii) *Areas Sold at Auction and by Special Sales.* During the year 1926, a total of 538 acres was disposed of under this tenure, 359 acres being country lands, while 179 acres of town and suburban lands were sold by auction.

3. **Queensland.**—Since the end of 1916, land, not already conditionally acquired, cannot be alienated to selectors in fee-simple.

4. **South Australia.**—(i) *Sales by Auction.* The following lands may be sold by auction for cash:—(*a*) special blocks, (*b*) Crown lands which have been offered for lease and not taken up within 2 years, (*c*) town lands, and (*d*) suburban lands, which the Governor excepts from the operations of the Land Board. A purchaser must pay 20 per cent. of the purchase money in cash, and the balance within one month or within such extended time as the Commissioner of Crown Lands may allow. Town lands may be sold subject to the condition that they cannot be transferred or mortgaged for 6 years.

(ii) *Areas Sold, etc.* During the year ended 30th June, 1927, the area of town lands sold by auction was 41 acres. In addition, 32,582 acres were sold at fixed prices, and the purchases of 191,093 acres on credit were completed, making a total of 223,716 acres.

5. **Western Australia.**—(i) *Sales by Auction.* Town, suburban, and village lands, after being surveyed into lots and notified in the *Gazette*, must be sold by auction. Ten per cent. of the purchase money must be paid in cash, together with the value of any improvements, and the balance in four equal quarterly instalments. Suburban land must be fenced within 2 years, and, until that is effected, no Crown grant may be issued.

(ii) *Areas Sold.* During the year ended 30th June, 1927, the area of town and suburban allotments sold was 1,149 acres in 678 allotments.

6. **Tasmania.**—(i) *Sales by Auction.* Town lands may be sold by auction for cash or on credit, no conditions being imposed beyond the payment of the purchase money. No town land, the price of which is less than £15, may be sold on credit.

(ii) *After-auction Sales.* Town lands, not within 5 miles of any city, which, after having been offered at auction, have not been sold, may be sold at the upset prices by private contract.

(iii) *Sales of Land in Mining Towns.* Any town land in a mining area may be sold by auction for cash, provided that any person, being the holder of a residence licence or business licence in lawful occupation of a residence area or business area and the owner of permanent improvements of a value equal to or greater than the upset price, is entitled to purchase such area at the upset price, prior to the sale by auction. The upset price of the unimproved value must not be less than £10 and the area must not exceed ½ acre.

(iv) *Areas Sold.* During the year 1926 the area sold by auction or by special sale amounted to 277 acres, as against 580 acres for the previous year.

§ 4. Conditional Purchases of Freehold.

1. **New South Wales.**—(i) *Residential Conditional Purchases.* Crown lands, not within certain areas, and not leased or reserved, are open for conditional purchase application at the price of 20s. per acre, unless gazetted at a different price. The maximum area which may be conditionally purchased is 1,280 acres in the Eastern Division, and 2,560 acres in the Central Division, and the minimum area is 40 acres. These maximum areas may, however, be exceeded in certain circumstances by additional holdings out of areas set apart for the purpose in order to make up a home-maintenance area. In a special area, the areas are such as are gazetted with a maximum of 320 acres. Applications for land within a classified area need not be accompanied by a deposit if lodged during the first week the land is available, but otherwise every application must be accompanied by a deposit of 5 per cent. of the price of the land, together with the amount of survey fee or an instalment thereof and the necessary stamp duty. The balance of the purchase money, with 2½ per cent. interest added, is payable in annual instalments of 5 per cent. of the price of the land, or, at the purchaser's option, of ninepence in the pound of the full purchase money, the first instalment being payable at the end of the third year from the date of application. The following conditions attach to a conditional purchase :—(*a*) the holder must reside thereon for 5 years, (*b*) the boundaries must be fenced within 3 years after the confirmation of the application, and such fence must be maintained for a period of 5 years from such confirmation; or, alternatively, (*c*) improvements must be made within 3 years to the value of not less than 6s. per acre, and within 5 years, 10s. per acre, but the value of such improvements need not exceed £384 or 30 per cent. of the value of the land within 3 years, and £640 or 50 per cent. within 5 years. A Crown grant in fee-simple is issued when all the conditions have been complied with, and the balance of the purchase money, survey fee, stamp duty and deed fee have been paid.

(ii) *Non-residential Conditional Purchases.* Crown lands which are open to ordinary conditional purchase may be conditionally purchased without the condition of residence subject to the following conditions :—(*a*) the area must not exceed 320 acres, (*b*) the applicant must be not less than 21 years of age, (*c*) no person, without the consent of the Minister, may make a subsequent purchase, except as an additional conditional purchase which, together with the original purchase, must not exceed 320 acres, (*d*) the price is double that payable for the same land as a residential purchase, and the deposit is 2s. for each pound of purchase money or 5 per cent. of capital value if the land is within a classified area, the balance of which, with 2½ per cent. interest added, is payable after the third year in annual instalments of 2s. per pound or of 9d. in the pound of the full purchase money, and (*e*) the boundaries must be fenced within 12 months and not less than £1 per acre expended within 5 years on other permanent improvements. Fencing may be dispensed with, subject to other approved improvements being effected to the value of 30s. per acre within 5 years after confirmation of the application.

(iii) *Additional Conditional Purchases.* An applicant for or holder of an original conditional purchase or a holder of a freehold (not in the Western Division) containing not less than 40 acres, and which with other lands held does not constitute a home maintenance area, may, subject to certain conditions, apply for an additional conditional purchase, but the whole area contained in the original purchase or freehold together with the additional purchase must not exceed the maximum allowed for an ordinary conditional purchase. An additional conditional purchase is subject to the same conditions as an original holding.

(iv) *Conversions of Leases into Conditional Purchases, etc.* (*a*) The holder of a conditional lease may convert the whole or part of the land comprised therein into an additional conditional purchase.

(*b*) A conditional purchase lease may be converted into a conditional purchase or conditional purchase and conditional lease on payment of 5 per cent. deposit on the capital value of the land and the balance in equal annual instalments of 5 per cent. of the purchase money with interest at 2½ per cent. Such conditional purchase or conditional purchase and conditional lease is subject to all the unfulfilled conditions of the lease, except that of the payment of rent.

(*c*) A non-residential conditional purchase may be converted into an ordinary conditional purchase, and residence must commence within three months of such conversion, the period of residence being reduced by the period of *bona fide* and continuous residence on the holding immediately prior to conversion.

(*d*) The holder of a special lease or of an agricultural or pastoral lease granted under the Church and School Lands Dedication Act may, under certain conditions, apply to convert his holding into a conditional purchase or an additional conditional purchase. The period of residence is reduced by the period of continuous residence on the former holding immediately prior to conversion.

(*e*) A homestead selection or homestead farm may be converted into a conditional purchase or conditional purchase and conditional lease subject to any special provisions attached to the original holding, and to the general provisions respecting conditional purchases and conditional leases provided that, except in the case of a homestead selection acquired before 1st January, 1918, the area which may be conditionally purchased shall not, with other lands held, exceed a home maintenance area, any excess being only convertible into a non-convertible conditional lease. The term of residence commences from the date of confirmation, and is reduced by the period of continuous residence on the holding immediately prior to conversion. The deposit and payment of purchase money are the same as in the conversion of a conditional purchase lease (see (*b*)).

(*f*) The holder of a Crown lease (unless debarred by notification setting the land apart) or of a settlement lease may convert such lease into a conditional purchase or conditional purchase and conditional lease, provided that the area to be converted together with other lands held does not exceed that of a home maintenance area. Where the area of the lease together with such other lands exceeds a home maintenance area, the excess area may be held as a non-convertible conditional lease. The terms of payment and conditions are the same as in the case of conversion of a conditional purchase lease (see (*b*) above).

(v) *Purchases of Residential Leases.* A holder of a residential lease (including any additional residential leases) may, after the expiration of the first 5 years of his lease, apply to purchase the land held thereunder. The local Land Board fixes the price and reports to the Minister, who may either grant or refuse the application. No person may hold more than one such purchase.

(vi) *Purchases of Week-end Leases and Town Lands Leases.* The holder of a week-end lease or of a town lands lease may apply to purchase the land comprised therein, and the Minister may either grant or refuse such application. The price is the capital value of the land at the date of application and is determined by the local Land Board. The purchase money must be paid within 3 months, or within such further period as the Minister may determine, interest being chargeable at 5 per cent. per annum.

(vii) *Purchases of Suburban Holdings.* The land contained within a suburban holding may, with the consent of the Minister, be purchased by the holder thereof, on payment of the purchase money in ten equal annual instalments with 2½ per cent. interest. The value of the land, exclusive of the improvements effected by the holder, is fixed by the local Land Board, and the purchase is subject to a condition of residence on the land for 5 years from the date of taking up the suburban holding. No transfer of land so purchased may be made without the consent of the Minister.

(viii) *Areas Sold by Auction and Special Purchases, exclusive of Town Blocks within Irrigation Areas.* During the year ended 30th June, 1927, the total area sold was 3,028 acres, of which 595 acres were sold by auction and 255 acres as after-auction purchases, while 28 acres were sold as improvement purchases and 2,150 acres as special purchases. The amount realized for the sale of the whole area was £122,474.

(ix) *Areas Alienated as Conditional Purchases.* At the 30th June, 1927, the total number of conditional purchases in existence was 69,046, covering an area of 19,635,068 acres. The following table gives particulars of conditional purchases, including non-residential conditional purchases and special area conditional purchases, from 1922–23 to 1926–27, together with the total area for which deeds had been issued up to 30th June, 1927:—

CONDITIONAL PURCHASES, NEW SOUTH WALES, 1922–23 TO 1926–27.

Year ended 30th June—	Applications received.(a)		Applications Confirmed.(a)		Areas for which Deeds have been issued.	
	Number.	Area.	Number.	Area.	During the Year.	To end of Year.
		Acres.		Acres.	Acres.	Acres.
1923	361	69,524	200	34,453	667,073	20,637,146
1924	379	70,784	291	41,117	596,124	21,233,270
1925	423	68,496	344	42,123	590,220	21,823,490
1926	459	83,281	372	30,223	460,217	22,283,707
1927	202	51,117	127	29,706	449,117	22,732,824

(a) Exclusive of conversions from other tenures.

2. **Victoria.**—(i) *Residential Selection Purchase Leases.* A person may select from land notified in the *Gazette* as available, a selection purchase lease, the maximum area of which ranges from 200 acres of first-class land to 2,000 acres of Class 4A land. The annual rental varies from 1s. per acre in the case of first-class land to 2⅔d. in the case of Class 4A land, for a period of 20 years, or half those rates for 40 years. Certain specified conditions must be complied with and improvements effected during the first 6 years, and the selector is required to go into occupation within one year and reside on the property or within 5 miles thereof for 3 years and 9 months during the first 6 years, and may not transfer the land during that period. At any time after the expiration of 6 years, provided that all the conditions have been fulfilled, and the balance of the purchase money has been paid, a Crown grant may be obtained.

(ii) *Non-residential Selection Purchase Leases.* These leases are similar to the preceding with the exceptions that (*a*) the provision for payment during 40 years is omitted, (*b*) there is no residential condition, and (*c*) in the case of first class land, the value of the improvements to be effected is double that of those on a residential lease.

(iii) *Licences of Worked-out Auriferous Lands.* A person may obtain a licence to occupy an allotment of not more than 5 acres of worked-out auriferous lands for a period not exceeding 7 years and to a depth of not more than 50 feet, at a rental of not less than 1s. per acre per annum. Such licences contain conditions prescribed by the Governor. If the licensee has complied with all the conditions of his licence for a period of 7 years he is entitled to a Crown grant on payment of the purchase money, which is fixed by the Board of Land and Works at not less than £1 per acre, from which is deducted the amount paid in licence fees.

(iv) *Conditional Purchase Leases of Swamp or Reclaimed Lands.* A conditional purchase lease of swamp or reclaimed lands covers such term as may be agreed upon between the lessee and the Board of Land and Works, and provides for the payment of the value of the allotment with interest at the rate of 4½ per cent., by 63 half-yearly instalments. The lessee must keep open all drains, etc., and make improvements to the value of 10s. per acre in each of the first 3 years, but need not reside on the land.

(v) *Selection Purchase Leases of Mallee Lands.* The terms and conditions attached to these leases are the same as those attached to ordinary selection purchase leases, but the areas may be larger, ranging from 640 acres of first-class land to 4,000 acres of Class 4A land. The lessee must also, within 2 years, clear and cultivate at least one-fourth of his holding, and make provision for the storage of water.

(vi) *Murray River Settlements.* Crown lands near the River Murray may be subdivided into allotments not exceeding 50 acres each and taken up as conditional purchase leases. The value of the land is payable in 63 half-yearly instalments with not less than 4½ per cent. interest. Residential and improvement conditions are laid down, and after 12 years, if they have been complied with, a Crown grant may be obtained.

(vii) *Special Settlement Areas.* Crown land, upon which expenditure has been made by the Crown, may be set apart as a special settlement area, and surveyed into allotments not exceeding 200 acres each. Such allotments may be taken up as conditional purchase leases, but every Crown grant contains a condition that the land shall at all times be maintained and used for the purpose of agriculture, and the holder must reside thereon.

(viii) *Conversion of Perpetual Leases into Selection Purchase Leases.* A perpetual lease may, with the consent of the Board of Land and Works, be surrendered by the lessee, and a selection purchase lease (residential or non-residential) obtained in lieu thereof.

(ix) *Conversion of Auriferous Lands Licences into Selection Purchase Leases.* If the Minister of Mines consents, the Board may grant to the licensee of an auriferous lands licence a selection purchase lease in lieu thereof, provided that the land is improved to the value of £1 per acre and the occupation is *bona fide.*

(x) *Areas Purchased Conditionally.* The subjoined table gives particulars of the areas selected conditionally from 1922 to 1926 :—

AREAS PURCHASED CONDITIONALLY, VICTORIA, 1922 TO 1926.

(EXCLUSIVE OF SELECTION IN THE MALLEE COUNTRY.)

Particulars.	1922.	1923.	1924.	1925.	1926.
	Acres.	Acres.	Acres.	Acres.	Acres.
With residence	133,083	122,614	95,998	66,923	63,577
Without residence ..	53,603	77,903	61,965	26,073	29,919
Total	186,686	200,517	157,963	92,996	93,496
No. of selectors	741	791	552	369	509

3. Queensland.—The granting of freehold tenure having been abolished at the end of 1916, only those lands which are held under any form of conditional purchase tenure granted before the beginning of 1917 can be converted into freehold. Land cannot be taken up under any form of conditional purchase.

4. South Australia.—(i) *Agreements to Purchase.* Crown lands (except town lands) which have been surveyed or of which the boundaries have been delineated in the public maps, may be offered on agreement to purchase. The area which is to be cleared and rendered available for cultivation, and the payments to be made, are notified in the *Gazette.* An application must be accompanied by a deposit of an amount equal to the first half-yearly instalment of purchase money. The whole purchase money is payable in 60 equal half-yearly instalments, including interest at not less than 2 per cent. Preference is given in allotting land to the applicant who agrees to reside on the land for 9 months in each year. If no application is made within 3 months from the date of notification, the Commissioner may offer the land at a reduced price. No agreement may be granted to any person in the case of land the unimproved value of which exceeds £5,000, nor in such manner that the purchaser would hold lands under any tenure, except pastoral lease, of which the aggregate unimproved value would exceed that sum, excepting in cases where the land is suitable for pastoral purposes only, under which circumstances no agreement to purchase is granted if the carrying capacity of the unimproved land and of all other lands held by the applicant would exceed 5,000 sheep, or, if outside Goyder's line of rainfall, 10,000 sheep. The purchaser must fence in the land within 5 years and comply with specified conditions respecting improvements, and, after 6 years, if all the conditions have been complied with and the balance of the purchase money paid, may complete the purchase.

(ii) *Special Agreements to Purchase.* Where the Commissioner directs, the following provisions for payment are made :—(*a*) No instalments are payable during the first 4 years ; (*b*) from the end of the fourth to the end of the tenth year, each instalment is to be at the rate of 2 per cent. of the value of the land, and is to be regarded as interest only; (*c*) from the end of the tenth year, the interest included in the instalments is at the rate of 4 per cent. on the value of the land; and (*d*) the agreement is for 40 years, and the purchase money is to be paid in 60 half-yearly instalments at the rate of £2 16s. 5d. for every £100 of the purchase money, including interest, the payment of such instalments to commence after the end of the tenth year.

(iii) *Homestead Blocks.* Any Crown lands and any lands which the Commissioner may acquire as suitable for homestead blocks may be surveyed and offered as homestead blocks, provided that the unimproved value of the fee-simple of a block does not exceed £100 and that no block is sold for a sum less than the amount paid therefor by the Government, together with the cost of offering the same. A homestead block may be held under an agreement to purchase, but only by a person gaining his livelihood by his own labour, and the holder must reside thereon for 9 months in each year. Such a block may be protected from encumbrance or seizure, if endorsed by the Commissioner as a "Protected Homestead Block."

(iv) *Lands Allotted.* The following table gives the areas of the lands allotted under Agreements to Purchase, exclusive of lands for Soldier Settlement, during the years 1922–23 to 1926–27. No Homestead Blocks have been allotted during that period.

AGREEMENTS TO PURCHASE, SOUTH AUSTRALIA, 1922–23 TO 1926–27.

Particulars.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	Acres.	Acres.	Acres.	Acres.	Acres.
Eyre's Peninsula Lands ..	50,005	111,456	90,320	121,368	159,770
Murray Lands	36,104	50,745	37,295	57,495	50,768
Pinnaroo Lands	11,886	44,291	27,633	62,245	51,476
Closer Settlement Lands ..	9,096	7,302	6,357	7,471	33,857
Homestead Lands (repurchased) ..	12	19	..	..	15
Buckleboo Railway Lands ..	..	5,680	10,614	46,710	20,326
Other Crown Lands	11,619	17,160	8,926	11,802	16,363
Total	118,722	236,653	181,145	307,091	332,575

5. **Western Australia.**—(i) *General.* Agricultural land is divided into two classes—cultivable and non-cultivable. The maximum area to be held by any one person is 1,000 acres of the former or 5,000 acres of the latter, or in similar proportions thereof.

(ii) *Conditional Purchases with Residence.* Land may be disposed of subject to the following conditions:—(*a*) The price is fixed by the Governor, with a minimum of 3s. 9d. and a maximum (except with special approval) of 15s. per acre, the lease to be from 25 to 30 years; (*b*) the maximum area which one person may hold is 1,000 acres, and the minimum, except in approved cases, 100 acres; (*c*) 7 per cent. of the survey fee to be paid in the first 5 years of the lease, and the survey fee with interest and purchase money to be paid over the balance of the term; (*d*) the lessee must reside on the lease for 6 months in each year for the first 5 years; (*e*) the lessee must expend on prescribed improvements an amount equal to one-fifth of the purchase money in every 2 years for the first 10 years of his lease, and fence one-half of the holding within 5 years and the whole within 10 years; and (*f*) at any time after 5 years, provided that all conditions have been complied with and the full purchase money and fee paid, the Crown grant will issue.

(iii) *Conditional Purchases without Residence.* Land may be disposed of without the residence condition, subject to all the other conditions prescribed in the previous sub-section, except that the amount to be expended on improvements must be a sum equal to the amount of purchase money, with 50 per cent. added thereto.

(iv) *Conditional Purchases by Direct Payment.* Land may also be disposed of without residence conditions, subject to the following :—(*a*) The price is fixed by the Governor, but at not less than 10s. per acre, payable within 12 months or sooner; (*b*) the application must be accompanied by a deposit of 10 per cent. of the purchase money, and, if accepted, a licence is issued for 7 years; (*c*) the balance of the purchase money must be paid in 4 equal quarterly instalments within 12 months; (*d*) the lessee must fence in the whole of the land within 3 years, and must expend 10s. per acre on improvements in 7 years; and (*e*) when all the conditions have been fulfilled, and the full purchase money and fee paid, a Crown grant must be issued.

(v) *Conditional Purchases of Land for Vineyards, Orchards, and Gardens.* The Governor may declare any Crown lands open for selection for vineyards, orchards, and gardens, subject to the following conditions :—(*a*) The price must be not less than 10s. per acre; (*b*) 10 per cent. of the purchase money must be deposited with the application, and if the latter is accepted, a licence is issued for 3 years; (*c*) the balance of the purchase money must be paid in half-yearly instalments within 3 years; (*d*) the maximum area held by one person must not exceed 50 acres, and the minimum not less than 5 acres; (*e*) the lessee must within 3 years fence in the whole of the land and plant at least one-tenth thereof with vines or fruit trees or cultivate one-tenth as a vegetable garden; and (*f*) on completion of the conditions, and payment of the purchase money, a Crown grant must be issued.

(vi) *Conditional Purchases of Inferior Lands.* Land which is classed as inferior and second or third class land may also be sold under the conditions mentioned in previous paragraphs, but the price may be reduced to not less than 3s. 9d. per acre, and that of land infested with poison plant may be reduced in price to not less than 1s. per acre.

(vii) *Conditional Purchases by Pastoral Lessees.* A pastoral lessee in the South-West Division may apply for land within his lease not exceeding one-fifth of the land leased by him under conditional purchase, with residence condition, and may hold a maximum area of 2,000 acres, and a minimum area of 200 acres. Similarly, a pastoral lessee in the Kimberley, North-West, Eastern or Eucla Divisions, who has in his possession at least 10 head of sheep or 1 head of large stock for each 1,000 acres, may apply to purchase an area not exceeding 1 per cent. of the total area held by him, the maximum area which may be so selected being 2,000 acres, and the minimum 500 acres.

(viii) *Conditional Purchases of Grazing Lands.* The Governor may declare lands situated in the South-West, Central or Eucla Divisions, which are unsuitable for agriculture, open for selection under the following conditions :—(*a*) The price must be not less than 3s. 9d. per acre; (*b*) the maximum area which can be held by any one person is 5,000 acres, and the minimum 100 acres; (*c*) on approval of the application, accompanied by a deposit of the first instalment of purchase money, a lease for 25 years is issued; (*d*) the lessee must reside on the lease for 6 months in the first year, and for 9 months in each of the succeeding 4 years; (*e*) the lessee must expend on improvements an amount equal to one-fifth of the purchase money in every 2 years; and (*f*) when all the conditions have been fulfilled, and the purchase money and fee paid, a Crown grant must be issued.

(ix) *Homestead Farms.* Crown lands, not within a goldfield, may be made available for free farms, termed "Homestead Farms." Any person, not already the holder of more than 100 acres of freehold land, or land held under special occupation or conditional purchase, is entitled to a homestead farm of not more than 160 acres or less than 10 acres. A fee of £1 must be paid with the application, and an approved applicant receives an occupation certificate for 7 years, and neither the land nor any interest therein of the selector is liable to be taken in execution. A selector must comply with the following conditions :—(*a*) Reside for 6 months in each year on the land for the first 5 years; (*b*) within 2 years expend not less than 4s. per acre on the total area; (*c*) within 5 years expend 10s. per acre; (*d*) within 7 years expend 14s. per acre on improvements and a house; and (*e*) fence one-half within 5 years, and the whole within 7 years. After 7 years a selector is entitled to a Crown grant, provided all conditions are fulfilled, or at any time after 12 months, provided all improvements are made, a Crown grant may be obtained on payment of a sum of 5s. per acre.

(x) *Village Allotments.* In connexion with any land set apart for selection as homestead farms, the Governor may declare any land within 5 miles thereof a village site, and such site may be subdivided into allotments not exceeding in area 1 acre each. Any selector of a homestead farm may select an allotment in such village without payment. As soon as the selector is entitled to a Crown grant of his homestead farm, he may, on payment of £1 and the prescribed fee, obtain a Crown grant of his village allotment.

(xi) *Working Men's Blocks.* Land may be set apart for working men's blocks and subdivided into lots not exceeding ½ acre each on a goldfield, or 5 acres elsewhere. Any person who is not already an owner of land in freehold or on conditional purchase, may obtain a lease under the following conditions :—(*a*) The price must be not less than £1 per acre, payable at the rate of one-tenth of the purchase money annually ; (*b*) one person may hold one allotment only ; (*c*) the application must be accompanied by the first instalment of purchase money, and, if approved, a lease for 10 years is issued ; (*d*) the lessee must reside on the block for 9 months in each of the first 5 years ; (*e*) the land must be fenced in within 3 years, and improvements, in addition, made within 5 years equal in value to double the purchase money ; and (*f*) after 5 years a Crown grant must be issued, provided all conditions are complied with and the purchase money and fee paid.

(xii) *Special Settlement Lands.* Land may be set apart as special settlement lands, and may be cleared, drained, or otherwise improved by the Government, and disposed of under the provisions of any preceding conditional purchase tenures.

(xiii) *Areas Alienated.* The following table shows the number of holdings and the areas conditionally selected for which Crown grants were issued and conditionally alienated during the years ending 30th June, 1923 to 1927. Under the heading " Deferred payments (with residence) " are included conditional purchases of grazing lands.

CONDITIONAL PURCHASES.—WESTERN AUSTRALIA, 1922–23 TO 1926–27.

Particulars.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
NUMBER OF HOLDINGS.					
	No.	No.	No.	No.	No.
Crown Grants Issued	1,553	1,557	2,153	3,010	2,288
Conditionally Alienated ..	2,997	2,889	2,406	2,579	2,455
AREAS FOR WHICH CROWN GRANTS WERE ISSUED.					
	Acres.	Acres.	Acres.	Acres.	Acres.
Free Homestead Farms ..	53,506	40,080	38,387	50,814	47,398
Conditional Purchases	272,436	285,635	343,100	490,717	425,754
AREAS CONDITIONALLY ALIENATED.					
	Acres.	Acres.	Acres.	Acres.	Acres.
Conditional Purchases—					
(i) Deferred Payments (with Residence)	1,619,346	1,693,342	1,462,585	1,902,316	2,072,851
(ii) Deferred Payments (without Residence) ..	95,011	46,380	44,487	32,319	25,284
(iii) Direct Payments (without Residence)	1,121	3,317	2,606	2,346	2,900
Free Homestead Farms ..	111,202	90,745	73,138	85,025	76,603
Working Men's Blocks ..	..	..	..	..	..
Total	1,826,680	1,833,784	1,582,816	2,022,006	2,177,638

6. Tasmania.—(i) *Selections for Purchase.* Rural land is classified into (*a*) first-class land if its value is £1 an acre or over, (*b*) second-class land if less than £1 but not less than 10s. an acre, and (*c*) third-class land if less than 10s. and not less than 5s. an acre, provided that no Crown land within the area and during the currency of a pastoral lease may be sold at less than 10s. per acre. Any person may select for purchase (*a*) one lot of first-class land not exceeding 200 acres nor less than 15 acres on payment of a small deposit and the balance of the purchase money in instalments spread over 24 years, provided that he is not the holder upon credit of any first-class land or of any unclassified rural land, for which the whole of the purchase money has not been paid, or (*b*) at the value per acre fixed by the Surveyor-General, one lot of second-class land not exceeding 300 acres nor less than 30 acres, provided that he is not the holder upon credit of any second-class land for which the whole of the purchase money has not been paid, or (*c*) at the value per acre fixed by the Surveyor-General, one lot of third-class land not exceeding 600 acres nor less than 60 acres, provided that he is not the holder upon credit of any third-class land for which the whole of the purchase money has not been paid. The terms of purchase are as follows :—a sum equal to one-third of the price is added thereto by way of premium allowed for credit, and the whole sum is payable by a small deposit in the case of (*a*) or by a deposit of one-fortieth part thereof in the case of (*b*) and (*c*), and the balance in 18 and 14 annual instalments respectively. The following conditions must be observed :—(*a*) a purchaser of first-class land must during 8 consecutive years improve the land to the extent of 2s. 6d. per acre annually, and the land must be occupied for 5 years either by himself, a member of his family, or someone employed by him, and (*b*) on second and third-class land, improvements must be effected during 5 consecutive years to the value of 1s. per acre annually.

(ii) *Additional Selections for Purchase.* Any selector for purchase may make a further selection and purchase under the same terms and conditions, provided that the total area held by him does not exceed the maximum allowed for each class of land.

(iii) *Homestead Areas.* Any person who is not the holder on credit of any land may select and purchase at the price fixed one lot of first-class agricultural land, not exceeding 50 acres nor less than 15 acres. The purchase money is payable by a deposit at the time of selection, and the balance in 18 years in instalments, but no instalments are payable for the first, second, and third years. The purchaser must occupy the land within 4 years for a period of 5 years, and during that period effect improvements to the value of £1 per acre.

(iv) *Selections in Mining Areas.* Any person may select and purchase in a mining area one lot of first-class land, not exceeding 100 acres, on the condition that 2s. 6d. be expended per acre per annum on improvements for 8 years. The price is fixed by the Surveyor-General. Land within 1 mile of a town may be selected and purchased only in lots of not less than 10 acres nor more than 20 acres. The residence condition is for 3 years, to be commenced within 2 years.

(v) *Sales by Auction.* (*a*) *Town Lands.* Town lands may be sold by auction on credit, in which case one-third of the purchase money is added thereto as interest. One-fourteenth of the purchase money so increased must be paid at the time of sale, and the balance in 13 annual instalments. Improvements must be made within 5 years to the value of a sum equal to the purchase money, otherwise such land and any improvements thereon are liable to be forfeited.

(*b*) *Rural Lands.* Rural lands may be sold by auction for cash or on credit. After survey and before sale such lands must be classified into first class, second class, and third class lands, with the following minimum upset prices—first class, £1 per acre ; second class, 10s. per acre ; and third class, 5s. per acre. Lots of less than 15 acres of first-class land may be sold only for cash. When sold on credit, one-third of the purchase money is added thereto as interest, and one-fortieth of the whole must be paid as deposit, and the balance in 14 annual instalments. Whether sold for cash or on credit, the same conditions of residence and improvements apply as in the case of land selected for purchase.

(*c*) *Lands within Mining Areas.* Crown land in mining areas, not selected under (iv) above, may be sold by auction for cash or on credit, having been previously surveyed into lots of (*a*) not more than 100 acres nor less than 10 acres of first-class land ; (*b*) not less than 30 acres of second-class land; and (*c*) not less than 50 acres of third-class land. No land within 1 mile of a town may be sold as second-class land. The upset price may not be less than £1 per acre for first-class land, 10s. per acre for second-class, and 5s. per acre for third-class land. The usual conditions as to improvements apply, and first-class land must be occupied for at least 3 years.

(vi) *After-auction Sales.* Town lands, not within 5 miles of a city, rural lands, and lands within a mining area, which have been offered for sale by auction and not sold, may be sold at the upset price by private contract under the same conditions as if sold by auction.

(vii) *Sales by Private Contract.* Where any second-class Crown land, being less than 30 acres in area, and not contiguous to or adjacent to any other Crown land, is so situated as to make it desirable that the same should be sold, it may be sold either on credit privately on the same terms as second-class lands or by public auction. In either case, the ordinary conditions as to the improvements on the land apply.

(viii) *Special Settlement Areas.* The Commissioner of Lands may withdraw from selection any area of rural land not less than 1,000 acres in extent which is first-class land suitable for agriculture, horticulture, or dairy farming, together with adjacent inferior land, and may expend money in improving the same and subdividing it into blocks. Such blocks may be submitted to auction under the ordinary conditions applicable to first-class land, or, without having been so submitted (*a*) may be declared to be open to any person; or (*b*) may be reserved for *bona fide* immigrants to the extent of one block in every six, for purchase by private contract at such price as the Commissioner may think fit, the purchase money being spread over 24 years. The usual conditions as to residence and improvements apply also to these blocks.

(ix) *Areas Conditionally Purchased.* The following table shows the areas alienated absolutely under systems of conditional purchases and sales on credit, also the areas sold conditionally and the applications for conditional purchases received and confirmed during the years 1922 to 1926:—

TASMANIA.—CONDITIONAL PURCHASES, 1922 TO 1926.

Particulars.	1922.	1923.	1924.	1925.	1926.
	Acres.	Acres.	Acres.	Acres.	Acres.
Completion of Conditional Purchases ..	67,759	81,112	69,453	55,623	48,577
Sold Conditionally—					
Selections for Purchase	40,502	20,138	16,760	24,745	26,608
Homestead Areas	78	..	..	15	..
Auction Sales on Credit ..	361	362	2,747	580	277
Town and Suburban Allotments ..	550	193	321	962	307
Total	41,491	20,693	19,828	26,302	27,192
Applications—					
Received	895	769	1,164	575	652
Confirmed	513	425	304	274	287

§ 5. Leases and Licences under Land Acts.

1. New South Wales.—(i) *Conditional Leases.* Any applicant for or holder of a conditional purchase may apply for a conditional lease of Crown lands adjoining his property, provided that the area of the conditional lease does not exceed three times the area of the conditional purchase and the combined area does not exceed the maximum allowed for conditional purchases. In certain circumstances the maximum area may be exceeded in order to make up a home-maintenance area. The term of the lease is 40 years, divided into three periods of 15, 15 and 10 years, but the holder of any such lease subsisting

at 24th December, 1924, may, upon application made during the last 5 years of the lease, have the term thereof extended for a period of 20 years divided into two periods of 10 years each. The annual rent is determined by the local Land Board for the first period and remains unchanged for the second and third periods unless redetermined by the Board. Where the lease is extended to 60 years the rent for the additional period is determined by the Board. Pending determination, the provisional rent is fixed at 2d. per acre. The conditions of residence and improvements are the same as those attached to a conditional purchase (see § 4. 1 (i)) and a conditional lease may be converted into an additional conditional purchase.

(ii) *Conditional Purchase Leases.* A conditional purchase lease has a term of 50 years divided into two periods of 25 years each. The areas of the blocks and the capital values are determined by the Minister. The annual rent is 2½ per cent. of the capital value, or as determined by the Land Board upon application. Five years' residence is necessary, and special conditions must be complied with. A holder of an original conditional purchase lease may apply for an additional conditional purchase lease, provided that the combined areas, with other lands held, do not substantially exceed a home-maintenance area. At any time after confirmation a conditional purchase lease may be converted into a conditional purchase (with or without a conditional lease) or a homestead farm.

(iii) *Special Conditional Purchase Leases.* A special conditional purchase lease together with any additional special conditional purchase lease held in virtue thereof must not exceed an area of 320 acres. A deposit of rent at the rate of 6d. per acre must be made at the time of application, and, in addition to the conditions other than residence attached to a conditional purchase lease, the lessee must within 3 years effect improvements to the value of from 10s. to £1 per acre as the Minister may determine. There is no residence condition attaching to these leases. The lease may be converted into a conditional purchase without residence.

(iv) *Homestead Selections.* Conditions in regard to this method of taking up land are set out in Official Year Book No. 18, page 159, but practically no lands are now set apart under this tenure except as additions to existing holdings.

(v) *Homestead Farms.* A classified area may be subdivided into farms of such areas as the Minister may determine, the capital value and any special conditions as to improvements, etc., being notified in the *Government Gazette.* Such farms are leased in perpetuity at a rental determined by the Land Board upon application, or at the rate of 2½ per cent. of the capital value, which is subject to re-appraisement at the expiration of 25 years and every 20 years thereafter. Residence is obligatory for 5 years, and the holder may, during the first 5 years, in lieu of paying rent, expend during each year a sum equal to not less than the amount of rent for such year in effecting permanent improvements. The holder of an original homestead farm may, in order to make up a home-maintenance area, apply also for an additional homestead farm. A homestead farm may, under certain conditions, be converted into a conditional purchase or a conditional purchase and conditional lease; a conditional purchase lease; or a Crown lease.

(vi) *Settlement Leases.* Allusion to this method of tenure will be found in Official Year Book No. 18, page 159, but practically no lands are now set apart thereunder.

(vii) *Special Leases.* Special leases may be granted for a period not exceeding 28 years for (*a*) wharves and jetties; (*b*) miscellaneous purposes, including grazing, agriculture and business purposes, up to 320 acres; or (*c*) tramway or irrigation purposes not exceeding 3 chains in width without any limit in length. The rent is determined by the local Land Board. The whole or part of a special lease granted for irrigation or miscellaneous purposes may be converted into certain specified tenures.

(viii) *Annual Leases for Pastoral Purposes.* Crown lands may be offered by auction or by tender in areas not exceeding 1,920 acres on annual lease, or may be applied for in the prescribed manner, in which case the rent is fixed by the local Land Board. An annual lease is renewed by payment of rent in advance, but may be terminated by the

Minister on three months' notice. An annual lease does not exempt the land held thereunder from sale or lease of any kind. The holder of such lease may apply for the whole or part of the lease as a lease under improvement conditions, and may be granted a lease of an area sufficient for the maintenance of a home for a period not exceeding 10 years.

(ix) *Scrub Leases.* Crown land wholly or partly covered by scrub or noxious undergrowth, may be leased for a term up to 21 years, which may be extended to 28 years. subject to such conditions as the local Land Board may make for the purpose of destroying the scrub. The term of the lease is divided into such periods as the Minister may determine, and the rent for the second and subsequent periods is fixed by the local Land Board. Under certain circumstances a home-maintenance area may be converted into a homestead selection during the last year of the lease.

(x) *Snow Leases.* Land usually covered by snow for a part of each year may be leased by auction or tender in areas not exceeding 10,240 acres for a period up to 14 years, but no person may hold more than one such lease.

(xi) *Inferior Lands Leases.* Leases of land of inferior character or in isolated positions may be granted (subject to the terms notified in the *Gazette*) either by tender or sold by auction, or, if no bid is received at auction, on application at the upset price. A home-maintenance area may be converted into a homestead grant during the last year of the lease.

(xii) *Crown Leases.* Crown leases may be disposed of for agriculture or grazing, or for both, in such blocks and subject to such special conditions as the Minister may determine. The term is for 45 years with a residence condition of five years, which may in certain circumstances be fulfilled elsewhere. The annual rent is as determined by the Land Board upon application, or at the rate of 1½ per cent. of the capital value of the land, which is re-appraised every 15 years. The first year's rent may be remitted if permanent improvements to a like value have been effected in addition to those required under the conditions of the lease. During the last 5 years of the lease. the holder, unless debarred by notification, may convert an area thereof not exceeding that of a home-maintenance area into a homestead farm. Such lease may be converted into a conditional purchase with or without a conditional lease.

(xiii) *Improvement Leases.* Crown land not in the Western Division and which is not suitable for settlement until improved may be leased subject to the following conditions:—(*a*) the term must not exceed 28 years; (*b*) the area must not exceed 20,480 acres; (*c*) the amount bid at auction, or offered by tender, or the upset rent, is to be the annual rent; (*d*) covenants may be specified for the improvement of the land; and (*e*) during the last year of the lease the holder may apply for a homestead grant of a portion of the lease, not exceeding a home-maintenance area, and has a tenant-right in the improvements which he has made.

(xiv) *Occupation Licences.* An occupation licence entitles the licensee to occupy Crown lands for grazing purposes, but the licence is renewable only from year to year, and the fees are liable to re-determination annually.

(xv) *Leases of Town Lands.* Crown lands within the boundaries of any town may be leased by auction or tender, such lease being in perpetuity and not subject to any term of residence. The area must not exceed ½ acre. The value of the land is re-appraised every 20 years, and the rent is fixed at 2½ per cent. of such value. Except in special circumstances no person may hold more than one lease. The land comprised in such lease may be purchased under certain conditions.

(xvi) *Suburban Holdings.* The Minister may set apart suburban Crown lands, or Crown lands within population boundaries, or within the Newcastle pasturage reserve, or any other Crown land, for disposal by way of suburban holdings. The area of each holding is determined by the Minister, and the title is a lease in perpetuity. Residence for 5 years is necessary. The rent is as determined by the Land Board upon application, or at the rate of 2½ per cent. of the capital value, which is re-appraised every 20 years. An additional suburban holding may be acquired by the holder of an original holding. A suburban holding may be purchased under certain conditions.

(xvii) *Week-end Leases.* A week-end lease must not exceed 60 acres, and is held in perpetuity. The rent is 2½ per cent. of the capital value, which, after 25 years, is re-appraised every 20 years. No residence condition is attached, but improvements other than fencing must be effected to the value of £1 per acre within 5 years, and any special conditions carried out that may be notified. No person may hold more than one week-end lease except as mortgagee.

(xviii) *Residential Leases.* A holder of a miner's right may, for the purpose of *bona fide* residence, acquire a residential lease on a goldfield or mineral field, provided that:—(*a*) the area does not exceed 20 acres; (*b*) the term does not exceed 28 years; and (*c*) the conditions as prescribed are fulfilled. An additional residential lease may be acquired provided the combined areas do not exceed 20 acres. A resident holder of an area on a goldfield or mineral field may similarly hold a residential lease together with the area which he already holds, but the total area of the two together must not exceed 20 acres. A residential lease may be purchased under certain conditions.

(xix) *Holdings within Irrigation Areas.* Land is made available for disposal by way of purchase in fee-simple or lease, the purchase money or annual rental being determined by the Water Conservation and Irrigation Commission. Irrigation farm purchases, irrigation farm leases and non-irrigable leases may be sold by public auction or tender. The purchase money in respect of an irrigation farm purchase and a non-irrigable purchase may be made by a deposit of £5 and a number of instalments. In the case of a town land purchase the terms are fixed by the Commission. The title to an irrigation farm lease and a town land lease is a lease in perpetuity, the annual rent for the first twenty-five years of which is fixed and is again fixed each succeeding twenty years. The title to a non-irrigable lease may be a lease in perpetuity or for such term as may be determined. The performance of residential conditions commences within six months of the grant of an application for an irrigation farm purchase and an irrigation farm lease, and, when specially provided, in cases of non-irrigable purchases and non-irrigable leases. The holder is released from residential conditions when certain improvements have been effected to the satisfaction of the Commission. No residence condition attaches to a town land purchase or lease.

Irrigation farm leases, non-irrigable leases and town land leases may, if conditions have been complied with, be converted into purchases. Upon payment of any moneys due and if all conditions have been complied with, a Crown grant for an estate in fee-simple is issued to the holder of the purchase.

(xx) *Western Lands Leases.* Under the Western Lands Act the Minister may declare Crown lands in the Western Division open for lease, and specify the area and rent. No rental may be less than 2s. 6d. per square mile or part thereof nor more than 7d. per sheep on the carrying capacity, and may not be increased by more than 25 per cent. at each re-appraisement. The successful applicant is notified in the *Gazette* and must pay the first year's rent within one month after such notification. All leases issued under the Western Lands Act expire not later than the 30th June, 1943, except extended leases.

(xxi) *Forest Permits and Leases.* Under the Forestry Act, permits may be granted (*a*) to graze and water horses and cattle; (*b*) to occupy land as the site of a sawmill or other building, or any tramway, wharf, or timber depot; (*c*) to occupy land for charcoal burning or bee farming or other approved purpose; (*d*) to occupy land for growing fodder; and (*e*) to ringbark or otherwise kill or destroy trees. The fees are prescribed by regulation. Leases of land within State forests may also be granted for grazing or other approved purposes for any term not exceeding 20 years.

(xxii) *Areas Occupied under Leases and Licences.* On the 30th June, 1927, there were 89,982 leases and licences current under the control of the Department of Lands and the Western Land Board, comprising 114,082,488 acres of Crown lands.

The following table shows the areas which were granted under lease or licence during each year and those held under various descriptions of leases and licences at the end of the years 1922–23 to 1926–27:—

AREAS TAKEN UP UNDER LEASE OR LICENCE.—NEW SOUTH WALES, 1922–23 TO 1926–27.(*a*)

Particulars.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
Areas taken up under Crown Lands Act.	Acres.	Acres.	Acres.	Acres.	Acres.
Occupation licences	10,150	34,526	11,700	41,867	19,150
Conditional leases	132,444	233,123	179,241	46,817	47,267
Conditional purchase leases ..	164	656	..	..	..
Settlement leases	19,753	9,900	4,731	13,596	3,416
Improvement leases	3,500	3,205	11,872	..	1,260
Annual leases	275,147	468,311	70,112	117,299	135,282
Scrub leases	4,718	9,812	9,870	28,900	1,748
Special leases	131,098	88,506	109,692	91,489	92,480
Residential leases	319	359	277	496	422
Permissive occupancies	436,425	439,682	451,962	469,077	583,507
Prickly-pear leases	..	..	..	..	5,739
Crown leases	550,254	406,721	367,031	369,256	246,187
Homestead farms	460,502	371,816	524,632	307,259	140,412
Homestead selections and grants	9,124	10,017	2,922	5,223	14,523
Suburban holdings	5,130	3,617	641	419	1,547
Week-end leases	219	108	61	56	5
Leases of town lands	2	..	..	..	2
Returned soldiers' special holdings	110	22	4	11	25
Inferior land leases	1,280	..	10,053	..	..
Irrigation farms	..	1,338	1,357	3,224	1,879
Snow leases	..	..	..	33,720	18,000
Areas taken up under Western Lands Act.					
Leases	271,166	2,710,890	4,677,997	2,133,338	1,666,097
Permissive occupancies	382,445	38,660	180,483	82,152	195,871
Total	2,693,950	4,831,269	6,614,638	3,744,199	3,174,819

(*a*) See also § 7. 1. (vii), page 168.

AREAS OCCUPIED UNDER LEASE OR LICENCE.—NEW SOUTH WALES, 1922–23 TO 1926–27.(*a*)

Particulars.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	Acres.	Acres.	Acres.	Acres.	Acres.
Outgoing pastoral leases ..	399,944	270,222	227,240	220,209	211,660
Occupation licences (i) Ordinary ..	2,787,985	2,455,642	2,207,313	3,271,558	2,916,778
Occupation licences (ii) Preferential ..	770,192	715,240	578,930	600,701	503,476
Homestead leases	15,207	..	..	..	..
Conditional leases	14,134,010	14,075,585	13,939,063	12,732,099	12,239,782
Conditional purchase leases ..	293,013	265,643	246,355	203,084	205,720
Settlement leases	3,953,363	3,836,205	3,712,740	3,474,751	3,334,386
Improvement leases	2,903,511	2,707,312	2,185,952	1,928,950	1,606,767
Annual leases	1,949,887	1,694,209	1,477,571	1,434,482	1,376,768
Scrub leases	1,165,782	1,099,355	1,046,596	816,782	718,748
Snow leases	126,020	126,020	126,020	159,746	177,746
Special leases	828,091	795,780	795,908	752,409	757,328
Inferior land leases	59,787	59,787	72,200	50,160	45,002
Residential leases (on gold and mineral fields)	11,849	11,527	10,928	10,333	10,021
Church and school lands ..	11	11	11	11	11
Permissive occupancies (*b*) ..	2,063,273	2,182,302	2,441,260	2,542,842	2,919,990
Prickly-pear leases	24,829	21,028	19,298	16,779	19,776
Crown leases	4,519,500	4,764,214	4,874,737	5,171,229	5,260,371
Homestead farms	3,014,076	3,309,141	3,772,847	3,965,944	4,007,554
Homestead selections and grants ..	915,483	951,594	917,688	938,412	1,009,674
Suburban holdings	59,732	56,376	53,994	52,998	54,865
Week-end leases	714	791	575	403	393
Leases of town lands	134	129	121	123	119
Returned soldiers' special holdings	28,711	23,826	24,986	18,790	18,546
Irrigation farms and blocks ..	..	129,414	282,246	285,864	302,066
Western land leases and licences (*c*)	75,368,253	75,365,499	75,642,064	76,108,958	76,384,041
Total	115,393,357	114,916,852	114,656,643	114,758,517	114,082,488

(*a*) See also § 7. 1.(vii), page 168. (*b*) Permissive occupancies in the Western Division not included. (*c*) Includes permissive occupancies.

2. Victoria.—(i) *Perpetual Leases.* A person may take up as a perpetual lease an area of Crown land varying from 600 acres of first-class land to 2,880 acres of Class 4A land. The annual rental is fixed by the Board of Land and Works every 10 years. Specified improvements must be effected during the first 6 years, and residence on or within 5 miles of the land for 6 months during the first year and for 8 months during each of the 4 following years is necessary, but, if one-fourth of the allotment be cultivated during the first 2 years and one-half before the end of the fourth year, the residence covenant is not enforced.

(ii) *Auriferous Lands Licences.* Licences may be granted for any period not exceeding one year, entitling the holder to reside on or cultivate auriferous land not comprised within a city or town, and not exceeding in extent 20 acres. The terms and conditions are such as are approved by the Governor. No person may hold more than one licence. After the value of the land has been paid in rent, only a nominal rent is payable.

(iii) *Leases of Swamp or Reclaimed Lands.* Swamp or reclaimed lands may be leased in allotments not exceeding 160 acres, for a term of 21 years, subject to the lessee keeping open all drains, etc., thereon. The rent is fixed according to the value of the land as determined by the Board of Land and Works. The lessee must effect improvements to the value of 10s. per acre in each of the first 3 years, but residence on the land is not necessary.

(iv) *Perpetual Leases of Swamp or Reclaimed Lands.* The conditions under which these leases may be taken up are similar to those of ordinary leases, except that the lease is held in perpetuity, and the rent is fixed at 4 per cent. of the value of the land, which is re-appraised every 10 years.

(v) *Grazing Licences.* Grazing licences may be granted for a term not exceeding 7 years subject to cancellation at any time. In the case of returned soldiers, leases may be granted for 14 years. The rental varies according to the class of land.

(vi) *Perpetual Leases of Mallee Land.* Perpetual leases of Mallee land may be granted for areas ranging from 640 acres of first-class land to 4,000 acres of Class 4A land. The rent is 1½ per cent. of the value of the land, which is re-appraised every 10 years. Residence is necessary during 6 months of the first year and during 8 months in each of the following 4 years, but the residence condition is waived if one-fourth of the land is cultivated within 4 years and one-half by the end of the sixth year, or, alternatively, if improvements, ranging in value from 10s. to 2s. 6d. per acre, according to the class of land, are effected during the first 6 years.

(vii) *Miscellaneous Leases and Licences.* Leases up to 21 years at an annual rental of not less than £5, and annual licences at various rates are issued for different purposes, such as sites for residences, gardens, inns, stores, smithies, butter factories, creameries, brickworks, etc. Licensees who have been in possession of land for 5 years (if such land is situated outside the boundaries of a city) may purchase the same at a price to be determined by the Board.

(viii) *Bee Farm Licences.* Annual licences for bee farms may be issued for areas of not more than 10 acres at such fees as the Minister may fix.

(ix) *Bee-Range Area Licences.* A bee-range licence may be secured on payment of ½d. for every acre of Crown land within a radius of 1 mile of the apiary, and in connexion therewith all suitable timber may be protected from destruction although held under grazing lease or licence.

(x) *Eucalyptus Oil Licences.* A licence may be granted of land suitable for the growth of trees in connexion with the manufacture or production of eucalyptus oil. The licence is in force for such period and subject to such conditions as may be prescribed.

(xi) *Forest Leases.* Under the Forests Act, a person may obtain, for a term not exceeding 12 years, a lease of Crown land within any reserved forest for (*a*) the grazing of cattle; (*b*) sawmilling purposes, but not exceeding 3,000 acres in extent; or (*c*) any miscellaneous purpose for which a miscellaneous lease may be granted under the Land Act. The rent and conditions are as prescribed.

(xii) *Forest Licences.* Under the same Act, and subject to prescribed conditions, the Forests Commission may grant to any person for any term not exceeding one year a licence to occupy (*a*) any area for the grazing of cattle; (*b*) a special area, not exceeding 640 acres, for the cutting of timber; (*c*) an area, not exceeding one acre, for residence purposes; or (*d*) an area for any of the miscellaneous purposes for which a miscellaneous licence may be granted under the Land Acts.

(xiii) *Forest Townships.* A sufficient part of any reserved forest may be set apart as a forest township site, and divided into allotments. Such allotments may, upon the prescribed terms and rental, be leased for any term not exceeding 20 years to any person engaged in the forest industry or to any business person, and these leases are renewable.

(xiv) *Areas held under Leases and Licences.* The following statement shows the areas of Crown lands occupied under leases and licences from 1922 to 1926. All grazing area leases expired on the 29th December, 1920 :—

CROWN LANDS UNDER LEASE OR LICENCE.—VICTORIA, 1922 TO 1926.

Tenure.	1922.	1923.	1924.	1925	1926.
	Acres.	Acres.	Acres.	Acres.	Acres.
Grazing licences (exclusive of Mallee) ..	6,647,808	6,647,800	6,393,679	4,673,281	4,633,421
Mallee lands	2,405,320	2,405,328	1,699,422	2,112,763	1,392,097
Auriferous lands (licences)	61,577	56,789	53,227	46,992	46,247
Swamp lands (leases)	1,697	2,854	2,866	2,514	2,514
Perpetual leases	7,559	5,240	4,882	5,046	5,046
Perpetual leases under Mallee Lands Acts 1896-1901	113,632	102,518	100,657	106,207	95,827
Total	9,237,593	9,220,529	8,254,733	6,976,803	6,175,152

3. Queensland.—(i) *Perpetual Lease Selections.* The area of a perpetual lease selection must not exceed 2,560 acres, and is held under a lease in perpetuity. An applicant for such lease, who undertakes to reside on his selection during the first 5 years of his lease, has priority over other applicants, and further priority is granted to an applicant who, in addition, agrees to cultivate at least one-twelfth of his selection within the first 3 years. The annual rent during the first 15 years is 1½ per cent. of the notified capital value, provided that the rent for the second year is a peppercorn (if demanded). The annual rent for each period of 15 years thereafter is determined by the Land Court at a similar percentage of the unimproved capital value of the land as fixed by that Court. Where the land is in a prickly-pear area or a buffer area under the Prickly-pear Act, the maximum area allowed to one person may exceed 2,560 acres. The duration of each period of a selection in such an area is 30 years, and the Prickly-pear Land Commission, instead of the Land Court, fixes the rent.

(ii) *Perpetual Lease Prickly-pear Selections.* The maximum area for a perpetual lease prickly-pear selection is 2,560 acres, and the same conditions as to priority apply as in the case of an ordinary perpetual lease selection. The lease is in perpetuity and contains a condition for the destruction of the prickly pear and other noxious plants thereon. The rent for the first period, which corresponds with the time allowed for the destruction of the prickly pear, is a peppercorn (if demanded), and for the following period of 30 years, 1½ per cent. of the notified capital value. The rent for each succeeding period of 30 years is 1½ per cent. of the capital value as determined by the Prickly-pear Land Commission.

(iii) *Pastoral Leases.* The Minister may, by notification in the *Gazette*, declare any Crown land open for pastoral lease, subject to conditions as to fencing, improvements, and the destruction of noxious weeds. The notification must specify the areas to be leased, the maximum area which one person may hold, the term of the lease, which must not exceed 30 years, and the rent per square mile for the first period of 10 years. The rent for the second and third periods of 10 years is fixed by the Land Court. In a prickly-pear area or buffer area the periods are 20 years, and the Prickly-pear Land Commission fixes the rent.

(iv) *Preferential Pastoral Leases.* When the terms of the opening notification so indicate, land may be applied for during the first 6 months only as preferential pastoral leases, and, in that case, no person who is under 16 years of age or is the selector or lessee of a grazing selection or the owner of freehold land of an area of 5,000 acres and upwards shall be competent to apply for or hold the land as a preferential pastoral lease. The holder of an ordinary pastoral lease will also be debarred from applying for or holding the specified land under preferential pastoral lease if the area of the latter combined with that of the pastoral holding exceeds the maximum area mentioned in the notification. When an applicant for a preferential pastoral lease on making his application offers that the holding shall be subject to the condition of personal residence during the first 7 years, and undertakes to perform that condition, he receives priority over applicants who do not make such offer. In other respects the conditions as regards improvements and the destruction of noxious weeds are the same as in the case of an ordinary pastoral lease. The holder of a preferential pastoral lease must hold and use the land for his own exclusive benefit, but such stipulation is not made in connexion with an ordinary pastoral lease.

(v) *Pastoral Development Leases.* Crown lands may be opened for pastoral development leases for a maximum term of 40 years, subject to conditions calculated to encourage the lessee to successfully develop the land, which development would otherwise be abnormally costly.

(vi) *Prickly-pear Leases.* The Minister, on the recommendation of the Prickly-pear Land Commission, may, by notification in the *Gazette*, declare any Crown land (being prickly-pear land) open for prickly-pear lease subject to any of the conditions applicable to pastoral holdings situated outside a prickly-pear area or buffer area. The land comprised in a prickly-pear lease or any part thereof may be resumed for agricultural or mixed farming settlement without compensation except for improvements. The rent for the second and each succeeding period of 10 years is determined by the Prickly-pear Land Commission.

(vii) *Occupation Licences.* Annual licences are granted to occupy Crown lands, either after notification in the *Gazette* or by the Minister without competition. In the former case the rent is as notified, and in the latter is as fixed by the Minister. Licences expire on the 31st December in each year, but may be renewed from year to year upon payment of the rent on or before the 30th September, and the rent may be increased on or before that date. A licence is determinable at any time by the Minister on 3 months' notice.

(viii) *Special Leases.* The Governor may issue a lease of any portion of land for any manufactory, or for any industrial, residential or business purposes, or for any race-course or recreation purposes, for a period not exceeding 30 years upon such conditions as he thinks fit. A lease may also be issued of reserved lands which are infested with noxious weeds or scrub, conditionally on the lessee destroying such noxious plants.

(ix) *Grazing Selections.* Crown land may be leased as grazing selections, but no person may hold a grazing selection or selections exceeding 60,000 acres in the aggregate. A grazing selection must be fenced within 3 years with a stock-proof fence, a rabbit-proof fence, a marsupial-proof fence or with a fence which is both rabbit-proof and marsupial-proof as the terms of the notification opening the land for selection require, and when so fenced the selector is entitled to a lease, and in the case of land suitable for sheep, the applicant may be required to stock the selection with his own sheep for a specified period, and to use the land thereafter for wool growing. A condition is imposed for the destruction of noxious weeds. The annual rent for the first 7 years is as notified or tendered, and for each succeeding period of 7 years is as determined by the Land Court, except in the case of selections in a prickly-pear area or a buffer area. In such cases the Prickly-pear Land Commission determines the rent for the period of 14 years instead of 7 years. Grazing selections may be either (*a*) grazing farms, or (*b*) grazing homesteads ; and when land is declared open for grazing selection it must be available for grazing homesteads only during the first 56 days. If at the expiration of that period the land has not been applied for it shall for a further period of 34 days be deemed to be withdrawn from selection, after which it will be available for selection as a grazing farm only. The lease of a grazing farm is subject to the condition of occupation during the whole term. In the case of a grazing homestead the lease is subject to conditions of personal residence during the first 7 years of the term, and to occupation during the remaining period, provided the original selector continues to hold the selection. In the event of the sale of the selection the purchaser is required to fulfil the condition of personal residence for 5 years from the date of transfer, and thereafter the occupation condition applies, provided there is no further transfer.

(x) *Auction Perpetual Leases.* Perpetual leases of (*a*) town lands, in areas not exceeding half-an-acre; (*b*) suburban lands, in areas not exceeding 5 acres; and (*c*) country lands, in areas not exceeding 640 acres, may be sold by auction to any person, to trustees for religious or charitable bodies, or to companies. Improvements to the value of at least £25 must be effected within 2 years, and the rent during the first 15 years is fixed at 3 per cent. of the upset price, or of such greater capital sum as has been bid by the purchaser. For each period of 15 years thereafter, the rent is 3 per cent. of such unimproved value of the land as is determined by the Land Court. No person may hold more than 6 town or 6 suburban leases in any one town or adjacent thereto.

(x) *Areas taken up under Lease or Licence.* The following table gives particulars of the areas taken up under lease or licence during the years 1922 to 1926:—

AREAS TAKEN UP UNDER LEASE OR LICENCE.—QUEENSLAND, 1922 TO 1926.

Tenure.	1922.	1923.	1924.	1925.	1926.
	Acres.	Acres.	Acres.	Acres.	Acres.
Pastoral leases	2,998,480	3,326,320	4,594,760	12,049,560	21,520,000
Occupation licences	7,993,560	7,757,440	4,291,600	5,900,280	5,578,520
Grazing farms	1,306,603	1,938,428	744,565	1,167,474	1,270,605
Grazing homesteads	1,673,724	2,853,341	3,083,548	2,155,991	1,495,751
Perpetual lease selections ..	250,518	205,282	278,137	366,952	201,378
Perpetual lease prickly-pear selections	154,359	140,093	85,296	169,442	274,276
Auction perpetual leases, Town ..	206	175	127	188	145
,, ,, ,, Suburban	371	187	214	175	58
,, ,, ,, Country	924	1,067	1,293	1,631	1,272
Special leases	18,012	25,905	55,015	58,343	46,495
Leases of reserves	18,050	46,741	33,915	94,539	120,645
Prickly-pear leases	..	..	..	..	3,603,880
Total	14,414,807	16,294,979	13,168,470	21,964,575	34,113,025

The following particulars are available respecting leases taken up in 1927:—

Grazing farms	370,728 acres.
Grazing homesteads	1,168,074 acres.
Perpetual lease selections	160,088 acres.
Perpetual lease prickly-pear selections ..	218,432 acres.

The gross area held at the end of the year 1926 for purely pastoral purposes was 343,056 square miles.

One non-competitive perpetual lease was issued during 1926, the total area being 4¾ acres.

The total areas occupied under lease or licence will be found in a table at the end of this chapter.

4. South Australia.—(i) *Perpetual Leases.* Crown lands (except town lands) which have been surveyed, or of which the boundaries have been delineated in the public maps, may be offered on perpetual lease. Details concerning the area which is to be cleared and rendered available for cultivation, and the rent to be paid, are notified in the *Gazette.* An applicant must deposit with his application 20 per cent. of the first year's rent (if any). Preference is given in allotting land to the applicant who agrees to reside on the lease for 9 months in each year. If no application is made within 3 months from the date of notification, the Commissioner may offer the land at a reduced rent. No lease may be granted to any person of lands the unimproved value of which exceeds £5,000, except where the land is suitable for pastoral purposes only, while no lease is granted if the carrying capacity of all the lands held by the lessee would exceed 5,000 sheep, or, if outside Goyder's line of rainfall, 10,000 sheep. The lessee must fence the land within 5 years, and clear and render available for cultivation not less than one-eighth during the first 2 years, one-eighth during the second 2 years, and then one-eighth annually until three-quarters have been so cleared and rendered available for cultivation.

(ii) *Special Perpetual Leases.* Where the Commissioner directs, the following provisions apply respecting the payment of rent:—(*a*) No rent is payable for the first 4 years; (*b*) from the end of the fourth to the end of the tenth year, rent is payable at the rate of 2 per cent. of the value of the land; and (*c*) thereafter, 4 per cent. of the value of the land is payable in perpetuity.

(iii) *Homestead Blocks.* The conditions applying to these blocks are the same as those for blocks held under agreement to purchase, except that they are leased in perpetuity. (See § 4(iii).)

(iv) *Miscellaneous Leases.* Leases may be granted for various purposes for any term not exceeding 21 years at such rents and upon such conditions as the Commissioner may determine.

(v) *Licences.* Licences may be granted of Crown lands for (*a*) fishermen's residences and drying grounds, (*b*) manufactories, fellmongering establishments, slaughter houses, brick or lime kilns or sawmills, (*c*) depasturing sheep, cattle or other animals, or (*d*) any other approved purpose. These licences are in force for one year only and are subject to such fees and conditions as the Commissioner may impose.

(vi) *Pastoral Leases.* These leases are issued under the Pastoral Acts, and are granted for a term of 21 or 42 years. The rent is fixed by the Commissioner of Crown Lands, and is based on the unimproved value, which is re-appraised in the case of 42 years' leases after the expiration of 21 years. The lessee must expend in improvements such sum not exceeding 10s. per square mile per annum as is recommended by the Pastoral Board, but this covenant ceases when £3 per square mile has been expended. Conditions as to stocking must also be fulfilled.

(vii) *Leases to Discoverers of Pastoral Country, etc.* Under the same Acts, a person who has discovered pastoral lands, or has applied for a lease which has been abandoned for 3 years or more on account of vermin, may obtain a lease for 42 years at a peppercorn rental for the first 10 years, at 6d. per square mile for the next 10 years, and thereafter at a rent of 2s. per square mile annually.

(viii) *Special Leases to Discoverers of Water.* The Governor may, under the Pastoral Acts, issue a permit to any person desirous of searching for water. The permit is in force for one year and confers on the holder the exclusive right to search for water on the land specified therein, and a preferential right to a lease. The holder of a permit who has discovered a permanent supply of water equal to not less than 4,000 gallons per day suitable for great cattle may be granted a lease not exceeding 100 square miles at a similar rental to that paid by lessees who have discovered pastoral country (see preceding sub-section (vii)). The conditions of stocking are modified, and for 10 years the land is exempt from rating under the Wild Dogs Act. The discoverer of such water supply is also entitled to a reward of at least £200, provided the supply is not less than 3 miles from any existing well or bore.

(ix) *Leases of Resumed Lands (Pastoral).* The Commissioner may resume possession of any well or other place where water has been found, and of not more than 1 square mile of land contiguous thereto, or, in the case of artesian water, 5 square miles. A lease of such land may be offered by private contract or by auction, the original lessee of the land having a preferential right to such lease. The lessee must maintain an accommodation house, if required, and construct facilities for watering stock.

(x) *Irrigation Blocks.* Under the Irrigation Act, blocks of land are offered in irrigation areas on perpetual lease at rentals fixed by the Irrigation Commission. Provided that the block has not been cultivated, one-quarter only of the rent is payable for the first year, one-half for the second year, three-quarters for the third year, and thereafter the full amount annually. Residence for 9 months in each year is necessary, and certain specified improvements must be effected.

(xi) *Town Allotments in Irrigation Areas.* Perpetual leases of town allotments in irrigation areas must be offered for sale by auction, and, if not so sold, may be sold by private contract at not less than the upset price. A lessee must within 18 months effect improvements to the value of not less than 10 times the annual rent, but not less than £150 if the allotment is used for residential purposes, or £200 if used otherwise. Annual licences may also be granted to occupy town allotments.

(xii) *Forest Leases.* Leases of land comprised in any forest reserve under the Woods and Forests Act, for cultivation or grazing or both, are open to application for allotment by the Land Board for any term not exceeding 42 years. With the approval of the Commissioner of Forest Lands such land may also be leased by the Land Board. With the exception of leases in certain scheduled forest reserves, a lessee may apply to surrender his lease for an agreement to purchase in lieu thereof.

(xiii) *Areas Leased.* The following table gives the areas leased during each of the years 1922–23 to 1926–27 under the different forms of lease tenure :—

AREAS LEASED.—SOUTH AUSTRALIA, 1922–23 TO 1926–27.

Particulars.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	Acres.	Acres.	Acres.	Acres.	Acres.
Perpetual leases—					
Homestead lands (repurchased)	1	..	..	..	..
Irrigation and reclaimed lands	490	2,893	3,616	5,261	1,978
Non-irrigable land in irrigation areas	..	..	..	..	9,396
Other Crown lands	284,074	123,039	91,620	166,008	155,630
Miscellaneous leases					
Grazing	136,159	21,626	133,898	190,137	33,340
Grazing and cultivation	64,371	4,082	116,733	519,958	59,411
Forest	21,840	..	19,840	2,523	8,487
Pastoral leases	2,259,200	2,727,680	958,400	391,520	1,299,520
Total	2,766,135	2,879,320	1,324,107	1,275,407	1,567,762

The total areas held under lease are given in the table at the end of this chapter.

5. Western Australia.—(i) *Pastoral Leases.* Crown lands may be leased for pastoral purposes, the maximum areas of the blocks and the rentals varying according to the division in which they are situated, but no person may acquire more than 1,000,000 acres. Pastoral leases must be stocked within 2 years at the rate of 10 head of sheep or 2 head of large stock for each 1,000 acres, within 5 years with double that quantity, and for the remainder of the term with 3 times that number. Pastoral leases may be held for a term expiring on the 31st December, 1948, and the rentals are re-assessed at the end of 15 years, but may not be increased by more than 50 per cent. Lessees must improve their land to the extent of £5 per 1,000 acres within 5 years, and to the extent of £10 per 1,000 acres within 10 years.

(ii) *Special Leases.* The Governor may grant special leases of Crown lands, not exceeding 25 acres in area, for a term not exceeding 21 years, at a yearly rental of not less than £2. Such leases are granted for miscellaneous purposes, such as obtaining guano, sites for inns or factories, market gardens, and similar objects.

(iii) *Residential Leases.* Any unalienated town, suburban or rural lands, may be set apart for residential leases and subdivided into lots not exceeding ½ acre each. The terms and conditions are prescribed by regulation. Any holder of a residential lease, who has resided thereon for 2 years, may convert the same into a working-man's block.

(iv) *Leases of Town and Suburban Land.* The Governor may lease any town or suburban lands for a period of 99 years at an annual rental equal to 4 per cent. of capital value, which is to be re-appraised every 10 years.

(v) *Irrigation Leases.* Under the Rights in Water and Irrigation Act, any land may be acquired for or dedicated to the purposes of that Act, and the Minister may grant leases in perpetuity of any such land at an annual rent based on the unimproved capital value of the demised land (subject to re-appraisement at prescribed periods) and the value of the improvements thereon, subject to such conditions as are prescribed.

(vi) *Forest Permits.* Under the Forests Act, the Conservator of Forests may issue permits entitling the holders (*a*) to take and contract for the sale of forest produce ; (*b*) to occupy land as the site of a sawmill, as a timber depot, for growing fodder ; or (*c*) to work a sawmill ; or (*d*) to make roads or tramways ; or (*e*) to graze and water cattle or for any other approved purpose—on lands under his jurisdiction. The term of a permit must not exceed 10 years, and permits must be submitted to public auction. The Conservator of Forests may also grant forest leases on such conditions as he may think fit, for periods not exceeding 20 years, for grazing, agriculture, or other purposes not opposed to the interests of forestry.

(vii) *Areas Leased.* The subjoined table gives the number of leases and the areas of land leased by the Lands Department during the years ending 30th June, 1923 to 1927 :—

LEASES.—WESTERN AUSTRALIA, 1922–23 TO 1926–27.

Particulars.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
Number of leases issued ..	504	605	537	324	320
AREAS OF LEASES ISSUED.					
	Acres.	Acres.	Acres.	Acres.	Acres.
Pastoral leases	5,738,313	20,361,793	20,841,066	8,930.446	10,709.963
Special leases	3,838	2,265	2,894	2,394	2 626
Leases of reserves	36,396	25,370	56,275	21,468	111,379
	5,778,547	20,389,428	20,900,235	8,954,308	10,823,968

The total areas leased are given in the table at the end of this chapter.

6. **Tasmania.**—(i) *Grazing Leases.* Leases of grazing lands are put up to auction, the upset price being fixed by the Commissioner, but at not less than an annual rent of 5s. per 100 acres. Lands not disposed of by auction may be gazetted and let by private contract.

(ii) *Leases of Land Covered with Button-grass, etc.* The Commissioner may lease to any person, for a period not exceeding 26 years, any Crown land covered with button-grass, river-grass or rushes, at a rental which must not be less than 25s. per 1,000 acres, provided that the lessee covenants to improve the area to the value of £2 10s. per 1,000 acres per annum.

(iii) *Leases of Mountainous Land.* Leases for a period not exceeding 21 years may be granted of land situated at an altitude of not less than 1,800 feet. The rent is not less than £2 10s. per 1,000 acres per annum, and the lessee must improve the land to the value of £5 per 1,000 acres annually.

(iv) *Miscellaneous Leases.* The Commissioner may lease for a period not exceeding 14 years land for wharves, jetties, watercourses, manufactories, railways, tramways etc. The lessee must carry out the conditions stated in the lease and pay the prescribed rent half-yearly.

(v) *Temporary Licences.* The Commissioner may grant to any person a temporary licence to hold, for not exceeding 12 months, any Crown lands for such purposes and on such terms and conditions as may be prescribed.

(vi) *Occupation Licences.* An occupation licence for a year expiring on the 31st December may be issued at a fee of 5s. to any person, such licence entitling him to occupy the surface of any Crown land within a mining area not exceeding ¼ acre in extent.

(vii) *Pastoral Leases.* A holder of an occupation licence or any approved person may lease within a mining area by private contract a pastoral lease for a period not exceeding 14 years, upon such terms and conditions as the Governor may see fit. No such lease may exceed 1,000 acres in area.

(viii) *Residence Licences.* A residence licence, for which a fee of 10s. is charged, and which is in force until the 31st December, entitles the holder to occupy for residence an area not exceeding ¼ acre in any town situated within a mining area which has been surveyed and gazetted as available therefor.

(ix) *Business Licences.* A business licence, costing £1 for a year, expiring on the 31st December, authorizes the holder to occupy for business purposes the surface of any Crown land within a mining area, not exceeding ¼ acre in area.

(x) *Forest Leases, Licences and Permits.* Under the Forestry Act, the following leases, permits, and licences may be granted on lands contained in State forests and timber reserves :—(*a*) *Forest Permits.* A forest permit confers upon the holder, for not exceeding 15 years, exclusive rights over the land therein defined for all purposes connected with the obtaining, conversion and removal of timber and forest produce. Such permit may be submitted to public auction or tender, and is subject to the payment of royalties on all produce taken, and to the prescribed conditions; (*b*) *Occupation Permits.* An occupation permit may be granted for a period not exceeding 15 years for sawmill sites, timber depots, roads and tramways. A similar permit may also be issued entitling the holder to graze and water cattle; (*c*) *Forest Licences.* A forest licence authorizes the holder to take forest produce, subject to the payment of fees and royalties as prescribed. The term of such licence may not exceed 3 months; (*d*) *Forest Leases.* Land may be leased on such conditions as the Minister may think fit for not longer than 14 years for grazing, agricultural, or other purposes. No compensation is payable for improvements, but the licensee may remove any buildings or fences, or dispose of them to an incoming tenant; (*e*) *Plantation Leases.* The Minister may grant, for not exceeding 60 years, leases for plantation purposes at such rent and upon such conditions as may be prescribed.

(xi) *Areas Leased.* The following table gives the areas leased during each year and the total areas leased at the end of the years 1922 to 1926:—

AREAS LEASED.—TASMANIA, 1922 TO 1926.

Particulars.	1922.	1923.	1924.	1925.	1926.
AREAS LEASED DURING YEAR.					
	Acres.	Acres.	Acres.	Acres.	Acres.
Pastoral leases	197,597	89,666	171,484	188,652	243,124
TOTAL AREAS LEASED AT END OF YEAR.					
Ordinary leased land	1,608,000	1,577,653	1,593,000	1,575,000	1,926,100
Islands	108,000	107,000	107,000	106,000	112,000
Land leased for timber	236,847	308,072	272,270	282,673	290,100
Total	1,952,847	1,992,725	1,972,270	1,963,673	2,328,200

7. **North Australia and Central Australia**—(i) *Pastoral Leases.* A pastoral lease may be granted for such term, not exceeding 42 years, as the Commissions determine. The rental for the first period is fixed by the Commissions, and is subject to re-appraisement on such dates as are specified in the lease or as are prescribed.

(ii) *Agricultural Leases.* Agricultural lands are classified, and the maximum area which may be included in any one lease is as follows:—Division A, Cultivation Farms, Class 1, 1,280 acres, Class 2, 2,560 acres: Division B, Mixed Farming and Grazing, Class 1, 12,800 acres, Class 2, 38,400 acres. Agricultural leases are granted in perpetuity, and the rent for the first period is fixed by the Commission, and is re-appraised every 21 years. The lessee must—(*a*) in the case of lands for mixed farming and grazing, stock the land to the extent prescribed by the regulations and keep it so stocked; (*b*) establish a home within 2 years and reside on the leased land for 6 months in each year in the case of land for cultivation, and for 4 months in each year in the case of land for mixed farming and grazing; (*c*) cultivate the land to the extent notified by the Commission; and (*d*) fence the land as prescribed. The holder of an agricultural lease may apply for a grant in fee-simple of all or portion of the lands comprised in the lease, when, subject to compliance with certain conditions provided in the lease, the grant may be made.

(iii) *Leases of Town Lands.* Leases of town lands are granted in perpetuity, the rental being fixed every 14 years. Such leases must, in the first instance, be offered for sale by public auction, and if not so sold, may be allotted by the Commission to any applicant, at the rental fixed by the Commission. The lessee must erect, within such time as is notified, buildings to the value specified in the conditions of sale. The holder of a town lease may apply for a grant in fee-simple of the lands included in the lease, and if certain conditions provided in the lease are complied with, the grant may be made.

(iv) *Miscellaneous Leases.* The Commission may grant a lease of any portion of Crown lands, or of any dedicated or reserved lands, for any prescribed or approved purpose. Such leases are for a term not exceeding 21 years, and may be offered for sale by public auction, or granted to any applicant at an annual rental fixed by the Commission.

(v) *Leases of Garden Lands.* Leases of garden lands may be granted over areas within 10 miles of a town, provided the Minister has declared the area as garden lands. Under certain conditions the leaseholder may apply for a grant in fee-simple.

(vi) *Tropical Lands.* Any company incorporated or registered in North Australia may, upon entering into an agreement in the prescribed form, acquire an area of tropical lands (i.e., lands north of the sixteenth parallel of south latitude declared by the Minister to be tropical lands) not exceeding 20,000 acres for a term of 14 years for the growth of cotton or other tropical products. The company is entitled to a grant of the land in fee-simple at any time during the term of the agreement, on payment of 2s. 6d. per acre and subject to compliance with certain prescribed conditions.

(vii) *Grazing Licences.* Licences may be granted to graze stock on Crown lands for such period, not exceeding one year, as is prescribed, and at the rent and on the conditions specified.

(viii) *Occupation Licences.* Licences may be granted for any period not exceeding 5 years, and on specified rentals and conditions, for the purpose of drying or curing fish, or for any manufacturing or industrial purpose, or for any prescribed purpose.

(ix) *Miscellaneous Licences.* The Commission may grant licences for miscellaneous purposes for a period not exceeding 12 months on prescribed terms and conditions.

(x) *Leases to Aboriginals.* The Governor-General may grant to any aboriginal native, or to the descendant of any aboriginal native, a lease of Crown lands not exceeding 160 acres for any term of years upon such terms and conditions as he thinks fit.

(xi) *Areas held under Leases, Licences, and Permits.* The following table shows the total areas held under lease, licence, and permit at the end of the years 1923 to 1927 :—

NORTHERN TERRITORY.—AREAS HELD UNDER LEASES, LICENCES, OR PERMITS, 1923 TO 1927.

Particulars.	1923.	1924.	1925.	1926.	1927.	
					North Australia.	Central Australia.
	Square Miles.	Square Miles.	Square Miles.	Square Miles.	Square Miles.	Square Miles.
Right of purchase leases ..	1	..	..	..	..	..
Pastoral leases and grazing licences	209,711	214,390	224,490	230,341	158,229	74,527
Other leases and licences ..	3,301	3,039	4,283	4,223	12,326	23,984
Total	213,013	217,429	228,773	234,564	170,555	98,511

The statement hereunder shows the areas held under leases and licences, and the area of reserves, in North Australia and Central Australia respectively, at 30th June, 1927.

Particulars.	North Australia.	Central Australia.	Total.
Leases and licences—	Square Miles.	Square Miles.	Square Miles.
Pastoral leases	126,409	46,116	172,525
Annual pastoral leases	52	..	52
Pastoral permits..	2,631	825	3,456
Grazing licences	31,768	28,411	60,179
Agricultural leases	255	..	255
Mining leases and protected mining leases ..	4	4	8
Miscellaneous leases, including water leases ..	423	383	806
Total	161,542	75,739	237,281
Reserves—			
Aboriginal native	7,990	21,875	29,865
Prospecting for mineral oil and coal ..	2,220	2,000	4,220
Mission station	1,027	901	1,928
Total	11,237	24,776	36,013

8. Federal Capital Territory.—(i) *General.* Under the Seat of Government (Administration) Act 1910, Crown lands in the Territory may not be sold or disposed of for any estate in freehold except in pursuance of some contract entered into before the commencement of that Act. Leases of land in the City Area are granted under the City Area Leases Ordinance 1924–26, and leases of other lands under the Leases Ordinance 1918–27. Land is also leased for various purposes in the City Area under the Church Lands Leases Ordinance 1924–27, Leases (Special Purposes) Ordinance 1925–27, and the Recreation Land Leases Ordinance 1923.

(ii) *City Leases.* The Federal Capital Commission may grant leases in the city area of any Crown land for business or residential purposes. Such leases may be issued for a period not exceeding 99 years at a rental equal to not less than 5 per cent. of the unimproved value of the land, which value is subject to re-appraisement at the expiration of 20 years, and thereafter every 10 years. A suitable building must be commenced within 2 years and completed within 3 years unless an extension of time is allowed.

The first public auction sale of City Leases in Canberra was held on 12th December, 1924, at which 393 blocks were offered, including business and residential subdivisions. The leases of 146 blocks were sold at the auction, and 139 have been sold subsequently, while 64 blocks have been withdrawn from lease and buildings for public servants are being erected thereon by the Commission. A further sale of city leases on the 29th May, 1926, resulted in the disposal of 39 blocks, while 34 leases have been disposed of subsequent to the auction. At a third sale of leases on the 9th April, 1927, 67 additional business and residential blocks were disposed of. These leases included sites for boarding-house purposes, and also for a motor service station. The number of leases granted under the City Area Leases Ordinance 1924–26 to the 30th June, 1927, was 434, representing a capital value of £256,314.

Seven leases for church purposes have been granted under the Church Lands Leases Ordinance 1924–27, which require the lessees to submit a definite building programme within a specified period.

Six leases have been granted to date under the Leases (Special Purposes) Ordinance 1925–27, for church and scholastic purposes.

(iii) *Leases of other Lands.* Leases may be granted for grazing, fruitgrowing, horticulture, agriculture, residential, business, or other purposes for a period not exceeding 25 years. The annual rental is 5 per cent. of the assessed value of the land, including improvements which are the property of the Crown, plus the amount of rates payable. No person may hold under lease land of a greater value than £6,000, exclusive of the value of buildings and fences thereon.

(iv) *Areas of Acquired, Leased, etc., Lands.* At the end of the year 1927 the area of acquired lands was 212,157 acres; of lands alienated, 44,584 acres; of lands in process of alienation, 52,975 acres; of leases, 93,866 acres; and unoccupied, 180,078 acres. These figures are exclusive of 17,920 acres in the Jervis Bay area.

§ 6. Closer Settlement.

1. New South Wales.—(i) *Acquisition of Land.* For the purposes of the Closer Settlement Acts, the Governor may constitute three Closer Settlement Advisory Boards, but at present one such Board deals with closer settlement for the whole State. Where the Board reports that any land is suitable for closer settlement, the Governor may either purchase it by agreement with the owner, or, failing such agreement, where the value of the unimproved land exceeds £20,000, resume it compulsorily. All such purchases or resumptions must be approved by Parliament. Land within 15 miles of a railway, the construction of which is authorized, if the property of one owner, and exceeding £10,000 (exclusive of improvements) in value, may also be purchased or resumed.

Under the provisions of the Crown Lands Consolidation Act 1913, the Governor may acquire either by way of purchase or resumption, after report by the local Land Board, any land of any tenure for certain purposes, including settlement. Private lands may also be acquired for Closer Settlement by direct purchase under Executive Council authority.

(ii) *Disposal of Acquired Lands.*—(*a*) *Settlement Purchase and Soldiers' Group Purchase.*—Lands acquired or resumed for closer settlement are mainly disposed of as Settlement Purchase under the Closer Settlement Acts or Soldiers' Group Purchase under the Returned Soldiers' Settlement Acts. The capital value is as notified, and represents roughly the cost of acquisition plus the cost of subdivision, development, etc. Unless otherwise specified the deposit and annual instalment are 6½ per cent. of the capital value, including interest at the rate of 5½ per cent. per annum. The whole or any of the instalments of the purchase money may be paid at any time. Returned soldiers taking up settlement purchases or group purchases are not required to lodge any deposit. Residence for 5 years is obligatory, and in the case of a settlement purchase permanent improvements to the extent of 10 per cent. of the capital value of the land must be effected within 2 years, and an additional 15 per cent. within 5 years. Improvements existing on the land when selected are, however, taken into consideration in satisfaction of the improvement conditions. The external boundaries of a group purchase must be fenced within three years of confirmation, and any other special conditions must be complied with. Upon payment of purchase money and fulfilment of all conditions a grant in fee-simple is issued.

(*b*) *Sales by Auction.* Land acquired for closer settlement may also be set apart as township allotments. Such allotments, which must not exceed ½-acre in area, may be sold by auction, but no person may hold more than three allotments, except by way of mortgage.

(*c*) *After-auction Sales.* When any land has been offered for sale or lease by auction, and is not disposed of, any person may apply for the same at the upset price. The amount of the deposit, and the conditions for payment of the balance of purchase money shall be as notified in the *Gazette*. Such land may also be set apart for disposal under the Crown Lands Act.

(*d*) *Permissive Occupancies.* The Minister may grant permits to occupy any acquired land which remains undisposed of, upon such terms and conditions as he thinks fit.

(iii) *Closer Settlement Promotion.* Any three or more persons, or one or more discharged soldiers or sailors, each of whom is qualified to hold a settlement purchase, may negotiate with an owner of private lands to purchase a specified area on a freehold basis. If the Minister approves, the land is bought by the Crown and paid for in cash or debentures, but the freehold value including improvements must not exceed £3,000 for any one person, or in exceptional cases £3,500. If the land is suitable for grazing only, the value may be up to £4,000. If the land is purchased by the Crown for cash, the applicant pays therefor by annual instalments of 6½ per cent. of the capital value, including 5½ per cent. interest on the outstanding balance, but if payment for the land is made in debentures, the deposit and annual instalments are 1½ per cent. in advance of the rate of interest paid by the Crown on the debentures issued to the vendor, and the interest on the unpaid balance of the purchase money is ½ per cent. in advance of the rate of interest paid by the Crown as aforesaid. Any one or more discharged soldiers or sailors may also enter into agreements to purchase on present title basis a conditional purchase, a conditional purchase lease, a conditional purchase and conditional lease, a homestead selection, a homestead farm, a settlement lease, a Crown lease, an improvement lease or scrub lease, not substantially of a greater area than is sufficient for the maintenance of a home. The vendor is paid by the Crown as in the case of freehold lands, but the transfer is made direct to the purchaser. The land continues to be held under the same tenure and subject to the same conditions as prior to transfer.

(iv) *Areas Acquired and Disposed of.* Up to the 30th June, 1927, 1,854 estates, including 953 single farm propositions acquired for discharged soldiers or sailors, had been acquired for closer settlement.

The number of farms allotted under the Promotion Sections of the Closer Settlement Acts to date is 3,773, the area 1,802,570 acres, and the amount advanced by the Crown £8,368,475.

The following statement gives particulars of the aggregate areas opened up to the 30th June in each year from 1923 to 1927 :—

CLOSER SETTLEMENT AREAS (*a*).—NEW SOUTH WALES, 1922–23 TO 1926–27.

To 30th June—	Areas.			Capital Values.		
	Acquired Lands.	Adjoining Crown Lands.	Total.	Acquired Lands.	Adjoining Crown Lands.	Total.
	Acres.	Acres.	Acres.	£	£	£
1923	3,783,204	96,958	3,880,162	13,670,070	183,223	13,853,293
1924	3,798,493	96,958	3,895,451	13,719,343	183,223	13,902,566
1925	3,819,376	125,062	3,944,438	13,795,172	185,827	13,980,999
1926	3,845,170	125,212	3,970,382	13,880,292	213,200	14,093,492
1927	3,861,679	125,212	3,986,891	13,989,686	213,200	14,202,886

(*a*) Includes 64 long-term leases resumed for closer settlement.

The total area set apart was divided into 7,791 farms, comprising 3,954,165 acres, the remaining area being reserved for public purposes (roads, stock routes, schools, etc.).

The following table gives particulars regarding the disposal of the farms by closer settlement purchase for the years ended the 30th June, 1923 to 1927:—

CLOSER SETTLEMENT ALLOTMENTS.—NEW SOUTH WALES, 1922–23 TO 1926–27.

To 30th June—	Farms Allotted to Date.			Total Amount received in respect of Closer Settlement Farms.
	Number.	Area.	Value.	
	No.	Acres.	£	£
1923	6,759	3,380,634	11,903,855	2,538,553
1924	7,585	3,799,132	13,752,891	2,932,033
1925	7,598	3,859,481	13,979,184	3,659,493
1926	7,691	3,923,802	14,641,139	4,243,229
1927	7,692	4,026,698	14,630,660	4,957,270

2. Victoria.—(i) *Acquisition of Land.* For the purposes of closer settlement, the Closer Settlement Board may either by agreement or compulsorily acquire blocks of private land, and may also ratify any agreement made between persons resident in Victoria and an owner of land for the purchase thereof, and dispose of such land under the Closer Settlement Act. The payment for the land is made in Victorian Government stock or debentures.

(ii) *Disposal of Land.* All land acquired under the Closer Settlement Act is disposed of as conditional purchase leases, which are of three kinds :—(*a*) Farm allotments, each of which must not exceed £2,500 in value ; (*b*) workmen's homes allotments, not exceeding £250 in value ; and (*c*) agricultural labourers' allotments, not exceeding £350 in value. Land for public purposes may be sold in fee-simple. Land in irrigation districts is also disposed of under the Closer Settlement Act by the State Rivers and Water Supply Commission.

(iii) *Sales of Land.* Land for public purposes may be sold in fee-simple, at a price fixed by the Board, but the area of each site must not exceed 1 acre for a church or public hall, 2 acres for a butter factory or creamery, 5 acres for a school, packing-shed, cool stores, fruit works, or cemetery, or 15 acres for a quarry or recreation reserve.

(iv) *Conditional Purchase Leases.* A conditional purchase lease is for such a term of years as may be agreed upon between the lessee and the Board, and provides for the payment of the value of the land, with interest at not less than 4½ per cent., in not more than 73 half-yearly instalments. The principal conditions under which a lease is held are as follows :—(*a*) Noxious animals and weeds must be destroyed within 3 years ; (*b*) the land must be fenced in within one year ; (*c*) personal residence during 8 months of each year or residence by an approved deputy for the first 5 years is necessary ;

(*d*) improvements must be effected to the value of 2 instalments during the first year, to the value of 10 per cent. of the purchase money before the end of the third year, and to a further 10 per cent. before the end of the sixth year, or, if the residence condition is fulfilled by deputy, to the value of 10 per cent. of the purchase money during the first year, and to the value of 30 per cent. before the end of the sixth year; (*e*) on a workman's home allotment, a dwelling house of the value of at least £50 must be erected within one year and additional improvements to the value of £25 within 2 years; and (*f*) on an agricultural labourer's allotment, a dwelling house of the value of at least £30 must be erected within one year. After a period of 12 years, provided that all conditions are complied with and the full purchase money is paid, a Crown grant may be issued.

(v) *Conditional Purchase Leases in Mountainous Areas.* In mountainous areas, the Minister may direct that no instalments of purchase money and interest need be paid for a period not exceeding 10 years, and the term of the lease is extended accordingly. Interest at the rate of 5 per cent. for the free period is added to the capital value. During each year of such period, the lessee must reduce at least one-tenth part of the allotment to a state of clear grass or cultivation.

(vi) *Areas acquired and made available for Closer Settlement.* The following statement shows the operations under the provisions of the Closer Settlement Acts up to the 30th June, 1922, to 31st December, 1926:—

CLOSER SETTLEMENT.—VICTORIA, 1921-22 TO 31st DECEMBER, 1926.

(INCLUDING IRRIGATED AREAS.)

Year ended 30th June. (*b*)	Total Area Acquired by Government to Date.	Total Cost to Date.	How Made Available for Settlement.					Number of Applications Granted to Date.	Total Receipts to Date.	Repayments of Principal to Date.	Area Available for Settlement.
			Farm Allotments.	Workmen's Homes Allotments.	Agricultural Labourers' Allotments.	Town Allotments. (*a*)	Roads and Reserves.				
	Acres.	£	Acres.	Acres.	Acres.	Acres.	Acres.	No.	£	£	Acres.
1922	582,870	4,246,383	530,383	784	3,966	43,320	4,417	4,534	4,454,582	1,098,296	7,922
1923	737,882	5,299,035	670,956	784	3,788	43,236	4,990	4,758	4,794,908	1,202,777	99,573
1924	849,682	6,377,166	770,374	784	3,675	49,960	5,016	5,284	5,193,488	1,347,232	47,547
1925	927,052	7,057,626	841,952	784	3,713	49,878	5,210	5,787	5,798,898	1,573,576	17,879
1926	986,567	7,549,988	912,498	798	3,722	55,063	4,774	6,174	6,599,911	1,793,304	41,66[illegible]

(*a*) Includes all land sold other than under Conditional Purchase Lease.
(*b*) 31st December, 1925 and 1926.

3 **Queensland.**—(i) *Acquisition of Land.* The Minister, with the approval of the Governor in Council, may acquire for the Crown, either by agreement or compulsorily, private land in any part of Queensland. The purchase money may be paid either in cash, or, at the option of the Minister and with the consent of the owner of the land, wholly or in part by debentures. Not more than £500,000 may be expended in any one financial year in purchasing land. The land so acquired may be disposed of as perpetual leases only.

(ii) *Perpetual Lease Selections.* These leases are subject to the same conditions as similar leases under the Land Act. The capital value is fixed by the Governor in Council, but must not be less than the price actually paid for the land with 10 per cent. added thereto. The annual rent for the first 15 years is determined by the Minister, but must not exceed the rate paid by the Crown as interest on the purchase money for the particular estate of which the land forms part, and for each subsequent period of 15 years by the Land Court at a sum equal to 5 per cent. of the unimproved capital value.

(iii) *Settlement Farm Leases.*—The maximum area allowed to any one person is 3,840 acres. The term of the lease must not exceed 28 years, divided into periods of 7 years. The annual rent for the first period is as stated in the opening notification, and rent for each subsequent period is determined by the Land Court. The lease must be enclosed within 3 years with a good and substantial stock-proof fence, rabbit-proof fence, marsupial-proof fence or fence which is both marsupial-proof and rabbit-proof, and noxious plants must be destroyed. Conditions for the cultivation of a specified area, or the making of water improvements may also be imposed. A settlement farm lease is subject to the condition of personal residence during the whole term.

(iv) *Perpetual Town, Suburban, and Country Leases.* Perpetual leases of town, suburban, and country lands may be sold by auction, as is the case under the Land Act, the conditions of tenure being the same, except that the rent for the first 15 years is fixed at 5 per cent. of the upset price or price bid, whichever is the greater, and for further periods of 15 years at 5 per cent. of the unimproved value of the land or of the amount bid at auction, whichever is the greater.

(v) *Areas Acquired and Selected.* The total area acquired to the end of 1927 was 970,778 acres, costing £2,292,881. The following table gives particulars of transactions under the Closer Settlement Act at the end of each of the years 1923 to 1927 :—

CLOSER SETTLEMENT.—QUEENSLAND, 1923 TO 1927.

Particulars.		1923.	1924.	1925.	1926.	1927.
Total area selected	Acres	744,719	745,518	747,187	757,251	797,078
Number of selectors	No.	2,398	2,400	2,403	2,413	2,425
Agricultural farms	No.	2,118	2,114	2,108	2,107	2,108
Unconditional selections ..	No.	256	256	256	256	256
Perpetual lease selections ..	No.	563	566	575	587	586
Prickly-pear selections	No.	4	4	4	4	4
Perpetual lease prickly-pear selections	No.	3	5	5	4	5
Area sold by auction	Acres	12,582	12,582	12,582	12,667	12,706

4. **South Australia.**—(i) *Acquisition of Land.* The Commissioner of Crown Lands may acquire land at a cost of not more than £600,000 in two financial years, either by agreement or compulsorily.

(ii) *Sales by Auction.* Town lands may be sold by auction for cash. Blocks which are unallotted after one year may also be sold by auction, 25 per cent. of the purchase money being paid in cash, and the balance in 5 yearly instalments with interest.

(iii) *Agreements to Purchase.* Land acquired for closer settlement is divided into blocks, but no block may exceed £4,000 in unimproved value unless suitable for pastoral purposes only, in which case the limit is £5,000. The land so divided is open to conditional purchase, the applicant agreeing (*a*) to reside thereon for 9 months in each year; (*b*) to fence it in within 5 years; (*c*) to spend thereon in improvements during each of the first 5 years a sum equal to £3 for every £100 of the purchase money; and (*d*) to pay for the block either (1) in 35 years, in half-yearly instalments, of which the first ten are to be equal and calculated at the fixed rate on the purchase price, and each of the subsequent 60 instalments at a rate sufficient to repay during the 35 years the price together with interest at a fixed rate on the balance thereof; of (2) if the Commissioner so directs, in 64 years in half-yearly instalments, of which the first sixteen are at the rate of £1 11s. 5d. for every £100 of the purchase-money and the remaining instalments calculated at a rate sufficient to repay the price together with interest on the unpaid balance.

(iv) *Miscellaneous Leases.* Any blocks remaining unallotted for one year may be let on miscellaneous lease at a rental and upon such terms as are determined by the Land Board.

(v) *Areas Acquired and Selected.* The following table shows the area of land acquired for the purposes of closer settlement, and the manner in which it has been dealt with for the years ending 30th June, 1923 to 1927 :—

CLOSER SETTLEMENT.—SOUTH AUSTRALIA, 1923 TO 1927.

Year ended 30th June—	Area of Lands Re-purchased.	Agreements with Covenants to Purchase.	Total Area Leased as Homestead Blocks.		Perpetual Leases.	Miscellaneous Leases.	Sold.	Remainder Un-occupied (Including Roads and Land in Irrigation Areas).
			Right of Purchase.	Perpetual Lease.				
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1923 ..	729,141	513,241	473	1,342	50,103	144	127,012	36,826
1924 ..	729,141	509,040	440	1,342	50,208	171	137,934	30,006
1925 ..	735 703	501,319	408	1,291	46,118	171	149,971	36,425
1926 ..	745,905	497,065	354	1,291	35,759	151	158,275	53,010
1927 ..	769,776	521,346	354	1,253	35,718	151	167,431	43,520

The total area repurchased at 30th June, 1927, was 769,776 acres. The purchase money was £2,475,639. Of the total area, 726,256 acres had been allotted to 2,693 persons, the average area to each being 270 acres.

5. **Western Australia.**—(i) *Acquisition of Land.* Under the Agricultural Lands Purchase Act the Minister may purchase any land which an owner may offer to surrender at a price to be named in the offer, provided that such land is situated within 20 miles of an existing railway, or of one the construction of which is authorized by Parliament. Not more than £1,200,000 may be thus spent. The Minister may also improve any such acquired land prior to disposing of it, and the cost of such improvements must be added to the price at which it is sold to the selector.

(ii) *Disposal of Land.* Land acquired for closer settlement may be disposed of either as town and suburban areas, or under conditional purchase.

(iii) *Conditional Purchases.* Such land as is not reserved for roads, reserves, town and suburban areas, etc., is thrown open for selection under conditional purchase. The selling price is ascertained by adding to the price actually paid for the land 5 per cent. thereof and the cost of all improvements thereon, as well as the cost of subdivision and survey fee. Payment is to be made in half-yearly instalments extending over a period not exceeding 30 years. The maximum area which may be held by one person is 1,000 acres of cultivable land, or 2,500 acres of grazing land. In other respects the conditions are the same as those for ordinary conditional purchases.

(iv) *Town and Suburban Areas.* The Minister may dispose of town and suburban lands in the same manner as they may be disposed of under the Land Act.

(v) *Areas Acquired and Selected.* The total area acquired for closer settlement up to the 30th June, 1927 was 503,035 acres, costing £516,238. Of this area 16,999 acres have been set aside for roads, reserves, etc., leaving a balance of 486,036 acres available for selection. The following table gives particulars of operations under the Act for the years ending 30th June, 1923 to 1927 :—

CLOSER SETTLEMENT.—WESTERN AUSTRALIA, 1922-23 TO 1926-27.

Particulars.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
Area selected during the year Acres	44,866	..	..	11,514	39,644
Total area occupied to date Acres	396,148	396,148	375,798	387,312	423,937
Balance available for selection Acres	73,657	73,657	71,434	96,988	62,099
Total Revenue .. £	433,805	412,872	437,593	466,335	489,606

6. **Tasmania.**—(i) *Acquisition of Land.* The Minister may either purchase by agreement and acquire for the Crown private land or compulsorily acquire and take for the Crown blocks of private land. Land may be acquired only when the unimproved value thereof exceeds £12,000. Land may also be acquired by agreement when three or more persons are desirous of obtaining private land belonging to the same owner. Payment may be made in cash, or in debentures or stock bearing interest at 4½ per cent., or partly in debentures or stock at the option of the owner and with the consent of the Minister. Not more than £100,000 may be raised annually for closer settlement purposes, and the total amount borrowed must not exceed £500,000. Land so acquired may be disposed of either by leases with right of purchase or by special sales.

(ii) *Leases with Right of Purchase.* Land acquired under the Closer Settlement Act is thrown open to be leased for a term of 99 years, with the condition that the lessee has the right to purchase the same after ten years, provided that he does not own land (exclusive of the lease) of a value exceeding £1,500, exclusive of buildings, and has complied with all the following conditions :—(*a*) The land must be improved to the value of 2½ per cent. of the capital value in each of the first 10 years ; (*b*) the lessee himself, or his wife, or child over 18 years of age must reside on the lease within 2 years, for 8 months in each of the following 8 years, and the lessee may not transfer, mortgage or sublet his lease without the approval of the Minister; and (*c*) prescribed conditions relating to mining and cultivation, the destruction of pests and noxious weeds, etc., must be complied with. Under ordinary circumstances no allotment may exceed £1,500 in value, exclusive of any buildings thereon, but the Minister may increase the value up to £4,000.

(iii) *Special Sales.* The Minister may sell land in fee-simple as sites for (*a*) churches or public halls, not exceeding 1 acre; or (*b*) dairy factories, fruit-preserving factories, mills, or creameries, not exceeding 5 acres. The price of such land must not be less than the cost thereof, and must be paid in cash. The Minister may also reserve an area up to 100 acres in extent for township purposes, and sell blocks thereof for cash or on credit under the same conditions as those contained in the Crown Lands Act. Land not suitable for disposal by way of lease may be sold in fee-simple either by auction or by private contract.

(iv) *Areas Acquired and Selected.* Up to the 30th June, 1927, 36 areas had been opened up for closer settlement. The total purchase money paid by the Government was £367,132, and the total area acquired amounted to 100,919 acres, including 10,000 acres of Crown lands. Particulars for the years 1923 to 1927 are given in the following statement:—

CLOSER SETTLEMENT.—TASMANIA, 1923 TO 1927.

Year ended 30th June—	Number of Farms made Available.	Number of Farms Allotted.	Area of Farms Allotted.	Rental of Farms Allotted.	Total Area Purchased.
	No.	No.	Acres.	£	Acres.
1923	..	3	685	..	810
1924	..	..	..	..	..
1925	19	19	1,845	826	..
1926	33	26	2,909	544	2,307
1927	..	1	47	8	..

7. **Summary.**—The following table gives particulars of operations under the Closer Settlement Acts at the 30th June, 1927:—

CLOSER SETTLEMENT.—TOTAL AREAS ACQUIRED AND ALLOTTED AT 30th JUNE, 1927.

Particulars.		N.S.W.	Victoria. (*a*)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Area acquired ..	acres	3,861,679	986,567	970,778	769,776	503,035	100,919	7,192,754
Purchase price	£	13,989,686	7,549,988	2,292,881	2,475,639	516,238	367,132	27,191,564
Farms, etc., allotted	No.	7,692	6,174	2,425	2,693	995	331	20,310
	acres	4,026,698	809,522	797,078	726,256	387,312	85,176	6,832,042

(*a*) At 31st December, 1926.

The next table shows the areas of private lands acquired at the end of each financial year from 1923 to 1927:—

CLOSER SETTLEMENT.—AREAS OF PRIVATE LANDS ACQUIRED, 1923 TO 1927.

Year ended 30th June—	N.S.W.	Victoria.	Q'land. (*a*)	S. Aust.	W. Aust.	Tasmania.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1923 ..	3,783,204	737,882	785,311	729,141	446,804	89,250	6,571,592
1924 ..	3,798,493	849,682	785,311	729,141	446,804	89,250	6,698,681
1925 ..	3,819,376	849,682(*b*)	785,311	735,703	461,959	89,250	6,741,281
1926 ..	3,845,170	927,052(*c*)	970,778	745,905	500,292	90,882	7,080,079
1927 ..	3,861,679	986,567(*d*)	970,778	769,776	503,035	90,919	7,182,754

(*a*) Year ended 31st December.
(*b*) Year ended 30th June, 1924.
(*c*) Year ended 31st December, 1925.
(*d*) Year ended 31st December, 1926.

§ 7. Leases and Licences under Mining Acts.

1. New South Wales.—(i) *Holdings under Miners' Rights.* A holder of a miner's right, costing 5s. annually, is entitled to occupy Crown lands for the purpose of mining thereon. The size of a claim varies according to the nature of the mineral worked and the distance from existing workings. The principal condition of tenure is that work must be continuously carried on, unless exemption is granted. A holder of a miner's right may obtain an authority to enter and prospect on certain private lands. Water rights, machinery areas, and similar holdings may also be taken up under a miner's right.

(ii) *Gold-mining Leases.* A gold-mining lease is issued for a term not exceeding 20 years, with right of renewal for another 20 years. The maximum area granted is 25 acres, and the annual rent is 2s. per acre. A royalty of 1 per cent. of the value of all gold and minerals won must be paid to the State. Labour must be constantly employed—unless exemption is granted—at the rate of one man to every 5 acres during the first year of the lease, and thereafter one man to every 2 acres.

(iii) *Mineral Leases.* The maximum area which may be leased for mining for other than gold, coal, or oil is 80 acres. The rental and royalty are the same as for a gold-mining lease, but the labour conditions are one man to every 20 acres during the first year and one man to every 10 acres thereafter.

(iv) *Coal and Oil-mining Leases.* The term of a lease for coal or oil-mining is 20 years, the maximum area 640 acres, the rental 2s. per acre, and the royalty 6d. per ton on all coal or shale won, and 1 per cent. of the value of all oil won. Two men must be employed to each area of 320 acres for the first year and four men thereafter.

(v) *Business Licences.* A business licence, issued at an annual fee of £1, entitles the holder to occupy for the purpose of carrying on business not more than ¼ acre in a town or village, or 1 acre outside, on any gold or mineral field. No person may hold more than one area.

(vi) *Residence Areas.* A holder of a miner's right may occupy as a residence area not more than ¼ acre in a town or village, or 2 acres outside, on any gold or mineral field. Improvements to the value of £10 must be effected thereon, and no person may hold more than one area.

(vii) *Areas Occupied under Mining Acts.* The following table gives particulars of operations for the years 1923 to 1927. Of the 1,110 acres leased for gold-mining, during the year ended 30th June 1927, 13 acres were for dredging.

AREAS TAKEN UP UNDER MINING ACTS.—NEW SOUTH WALES, 1923 TO 1927.

Purposes for which Issued or Occupied.	1923.	1924.	1925.	1926.	1927.
AREAS TAKEN UP DURING YEAR.					
	Acres.	Acres.	Acres.	Acres.	Acres.
Gold-mining	3,088	1,250	4,669	1,236	1,100
Mining for other minerals ..	22,280	19,792	74,179	30,982	17,348
Authorities to prospect ..	14,241	6,968	19,629	24,338	10,672
Other purposes	534	482	1,336	883	1,365
Total	40,143	28,492	99,813	57,439	30,485
TOTAL AREAS OCCUPIED AT END OF YEAR.					
Gold-mining	10,428	8,171	10,780	12,343	9,736
Mining for other minerals ..	280,756	281,751	349,744	437,121	333,394
Authorities to prospect ..	9,179	2,461	21,347	76,086	11,664
Other purposes	6,973	7,305	8,322	7,808	8,781
Total	307,336	299,688	390,193	533,358	363,575

2. **Victoria.**—(i) *Holdings under Miners' Rights.* Under a miner's right costing 2s. 6d. annually, a miner may take up a claim on Crown lands, the area of which varies according to the nature of the ground and whether gold or minerals are to be won, conditionally on such claim being worked continuously, unless exemption is granted. Under the same tenure water rights, machinery areas, etc., may be obtained.

(ii) *Gold-mining Leases.* A gold-mining lease may be granted for a period not exceeding 15 years, renewable for a further 15 years, but no maximum area is prescribed. The rent is 2s. 6d. per acre per annum, and the labour conditions are as specified in the lease; but, under certain circumstances, the expenditure of a specified amount of money may be substituted for the labour conditions.

(iii) *Mineral Leases.* A mineral lease may be issued for the same period as a gold-mining lease, at a rental of not less than 1s. nor more than £5 per acre per annum and at such royalty (if any) as the Minister may determine. The area must not exceed 640 acres, and the Minister fixes the amount of labour to be employed.

(iv) *Business Areas.* The holder of a business licence is entitled to occupy ¼ acre of Crown lands in a city or town, or ½ acre in a borough, or 1 acre outside, for the purpose of residence and carrying on his business. A business licence costs 10s. a year in a city, town, or borough, or 5s. outside, together with 5 per cent. of the value of the land. A business area must be continuously occupied, unless exemption is obtained.

(v) *Residence Areas.*—The holder of a miner's right may occupy a residence area of the same dimensions as a business area under the same conditions of occupation, but no further payment than the cost (2s. 6d.) of the miner's right is required.

(vi) *Leases and Licences Issued.* During the year 1927, leases, licences, etc., were issued covering an area of 17,155 acres, the rent, fees, etc., for which amounted to £966. The following table gives particulars of operations for the years 1923 to 1927 :—

AREAS TAKEN UP UNDER MINING ACTS.—VICTORIA, 1923 TO 1927.

Particulars.	1923.	1924.	1925.	1926.	1927.
	Acres.	Acres.	Acres.	Acres.	Acres.
Area taken up during year ..	9,207	8,247	4,832	10,234	17,155
Area occupied at end of year ..	47,361	43,216	41,765	30,333	41,078

3. **Queensland.**—(i) *Holdings under Miners' Rights.* The holder of a miner's right, costing 5s. a year, may take up a prospecting area or a claim, the areas of which vary according to the nature of the mineral sought for or worked, and the distance from existing workings. Such land must be worked continuously, unless exemption is granted. A holder of a miner's right is also entitled to cut races, reside on Crown lands, cut timber thereon, etc.

(ii) *Permits to Prospect for Petroleum.* Any person may apply for a permit to prospect for petroleum. An area not exceeding 10,000 acres is allowed for a period of 2 years, and not more than two such permits may be held at the one time. A preferential right to a permit may be obtained for a period of 30 days by erecting a post or monument on the land and posting a notice in accordance with the Petroleum Act of 1923. A rental of 1d per acre per annum is payable for the land included in the permit. Within a year the holder of the permit must erect an adequate drilling outfit on the land and commence drilling, and within 2 years drill at least 2,000 feet.

(iii) *Licences to Prospect for Coal or Mineral Oil.* Any person may apply for a licence for one year to prospect Crown lands for coal or mineral oil. An area of 2,560 acres at a rental of 1d. per acre is allowed. The licence may be renewed for one year.

(iv) *Gold-mining Leases.* The term of a gold-mining lease is 21 years renewable for a further period of 21 years, and the maximum area is 50 acres, except in the case of a special lease, when 300 acres may be selected. The rent is £1 per acre per annum. One man must be kept constantly employed for every 4 acres, unless exemption is obtained.

(v) *Mineral Leases.* The term of a mineral lease is the same as that of a gold-mining lease, but the maximum area is, in the case of petroleum, one-fourth of the area included in the prospecting permit, with a preferential right to a further lease or leases of the balance of the area; 320 acres for mineral oil; 640 acres for coal; and 160 acres for other minerals. The annual rent per acre is (*a*) 1s. for coal and mineral oil, (*b*) 2s. for the first 2,500 acres and 4s. for the balance in the case of petroleum, and (*c*) 10s. for other minerals. The labour conditions are:—(*a*) For coal, one man for every 40 acres during the first 2 years, then one man for every 20 acres, or, alternatively, an expenditure during each half-year of £100 for every 40 and 20 acres respectively; (*b*) for petroleum, the installation of a drilling plant within 3 months, and the drilling of wells one at a time until a well has been drilled for every 100 acres; and (*c*) for other minerals, one man for every 10 acres. A royalty is payable of from 4d. to 1s. per ton on all coal raised, and of 12½ per cent. of the value of all petroleum won, there being no royalty on other minerals.

(vi) *Business Areas.* The holder of a business licence, the fee for which is £2 a year, may occupy ¼ acre of land on a gold or mineral field for the purpose of carrying on a business, and must occupy the same continuously, but is entitled to obtain exemption from occupation after having expended the sum of £10 on improvements. No person may occupy more than one area with one licence.

(vii) *Residence Areas.* The holder of a miner's right may take up a residence area of ¼ acre on a gold or mineral field, but may hold only one such area on the same field. Occupation is necessary in order to hold the ground, but exemption can be obtained under certain circumstances.

(viii) *Miners' Homestead Perpetual Leases.* A person, resident on a mining field, and otherwise qualified, also any corporate body carrying on business on the field, may take up a lease or leases not exceeding in area (*a*) 1 acre in a city, town, or township; or (*b*) 20 acres within 1 mile of a city, town, or township; or (*c*) from 80 to 640 acres outside such limits. The rent in the case of a lease sold at auction is 3 per cent. of the purchase price, and in other cases 1½ per cent. of the notified capital value of the land The land is subject to re-appraisement every 10 years. The title is a lease in perpetuity and the land must be occupied and improved.

(ix) *Areas held under Lease or Licence.* During the year 1927 the number of miners' rights issued was 3,918, and of business licences 15. The following table gives particulars regarding the areas of land taken up under lease or licence, and the total areas occupied for the years 1923 to 1927. In addition, an area estimated at 30,000 acres was at the end of 1927 held under miners' rights and dredging claims.

AREAS TAKEN UP UNDER MINING ACTS.—QUEENSLAND, 1923 TO 1927.

Particulars.	1923.	1924.	1925.	1926.	1927.
AREAS TAKEN UP DURING YEAR.					
	Acres.	Acres.	Acres.	Acres.	Acres.
Gold-mining	253	225	56	134	56
Mining for other minerals ..	5,560	6,694	4,390	6,454	3,864
Coal-prospecting licences ..	21,202	8,276	7,961	5,821	8,085
Miners' homestead leases ..	8,679	8,329	6,212	3,696	1,972
Mineral oil-prospecting areas	4,160	2,000	4,340	..	..
Petroleum-prospecting permits	25,900	90,000	29,200	..	281,700
Total	65,754	115,524	52,159	16,105	295,677

AREAS TAKEN UP UNDER MINING ACTS.—QUEENSLAND, 1923 TO 1927—*continued.*

Particulars.	1923.	1924.	1925.	1926.	1927.
TOTAL AREAS OCCUPIED AT END OF YEAR.					
	Acres.	Acres.	Acres.	Acres.	Acres.
Gold-mining	1,279	1,191	925	646	591
Mining for other minerals ..	22,012	28,753	31,306	34,133	35,452
Coal-prospecting licences ..	21,202	8,276	7,961	5,821	8,885
Miners' homestead leases ..	329,453	335,133	339,998	337,195	324,710
Mineral oil-prospecting areas	4,160	2,000	4,340	..	..
Petroleum-prospecting permits	66,480	123,705	71,200	44,800	287,700
Total	444,586	499,058	455,730	422,595	657,338

4. South Australia.—(i) *Holdings under Miners' Rights.* A miner's right costs 5s. per annum, and entitles the holder to take up a prospecting claim, a mining claim, a machinery area, a water right, etc. He is also entitled to take up a lease for mining purposes for a term not exceeding 21 years. The area of an alluvial gold claim is 100 feet by 100 feet, of a reef gold claim 330 feet by 660 feet, of a precious stones claim 150 feet by 150 feet, and of a mineral claim 40 acres. A gold or precious stones claim must be constantly worked by one man, a mineral claim by one man for each 20 acres, and a coal or oil claim by four men.

(ii) *Search Licences.* A search licence may be issued to the holder of a miner's right entitling him to search on any specified mineral lands, not exceeding 5 square miles in area, for precious stones, mineral phosphates, oil, or rare minerals, which have hitherto not proved payable. The licence is in force for 12 months, and the fee is £1 for every square mile. One man at least must be employed for every 640 acres. A licensee has a preferential right to a mineral lease of 40 acres for rare metals, of 100 acres for mineral phosphates, and of 640 acres for oil, or to a precious stones claim of 150 feet by 150 feet.

(iii) *Gold Leases.* A gold lease must not exceed 20 acres in area. The rent is 1s. per acre per annum, and a royalty of 6d. in the pound of the net profits must be paid. The labour conditions are 1 man to every 5 acres. For gold dredging, the maximum area allowed is 200 acres.

(iv) *Mineral Leases.* The maximum areas which may be taken up as mineral leases are for (*a*) coal, oil, salt, and gypsum, 640 acres; (*b*) other minerals, 40 acres. The annual rent per acre is for (*a*) coal or oil, 6d., until a marketable quantity is produced, then 1s.; and for (*b*) other minerals, 1s., except that a higher rent may be charged for salt or gypsum. A royalty of 6d. in the £ of the net profits is payable in the case of all minerals. The labour conditions vary according to the class of mineral sought, being (*a*) for coal and oil, 1 man to every 40 acres; (*b*) for barytes, ochre, etc., 1 man for 3 months in each year; (*c*) for gypsum, 2 men for every 40 acres; (*d*) for salt, 1 man for every 40 acres from January to April; and (*e*) for other minerals, 1 man to every 10 acres.

(v) *Business Areas.* Any person may, on payment of £1 per annum, obtain a business licence entitling him to occupy a business claim of ¼ acre in a township, or of 1 acre elsewhere, but no person may own or occupy more than one such claim, and business must be continuously carried on thereon.

(vi) *Residence Areas.* The owner of a claim, while actively engaged in prospecting or mining thereon, may occupy a residence site not exceeding ¼ acre on Crown lands, but, in order to hold the same, must reside thereon.

(vii) *Occupation Licences.* Any person may be granted an occupation licence authorizing him to occupy for the purpose of residence and cultivation ½ acre of Crown lands at a rental of not less than 2s. per annum. Such licence is in force for 14 years, and may be renewed from time to time until the land is required for public purposes.

(viii) *Areas Occupied under Mining Acts.* The following table gives particulars of operations for the years 1923 to 1927:—

AREAS TAKEN UP UNDER MINING ACTS.—SOUTH AUSTRALIA, 1923 TO 1927.

Particulars.	1923.	1924.	1925.	1926.	1927.
AREAS TAKEN UP DURING YEAR.					
	Acres.	Acres.	Acres.	Acres.	Acres.
Gold-mining leases	240	269	101	250	30
Mineral and miscellaneous leases	2,589	5,766	4,834	25	3,145
Claims	36,026	32,019	11,170	15,288	6,502
Search licences	571,520	473,600	295,040	246,400	204,800
Occupation licences ..	2	2	3	4	8
Total	610,377	511,656	311,148	261,967	214,485
TOTAL AREAS OCCUPIED AT END OF YEAR.					
Gold-mining leases	905	840	568	698	464
Mineral and miscellaneous leases	55,505	57,959	42,168	37,333	39,746
Claims	62,995	61,853	35,548	26,158	15,699
Search licences	534,400	465,280	290,560	246,400	202,880
Occupation licences ..	94	93	78	74	66
Total	653,899	586,025	368,922	310,663	258,855

5. Western Australia.—(i) *Holdings under Miners' Rights.* A miner's right, costing 5s. a year, entitles the holder to take up a prospecting area or a claim and occupy Crown lands for mining purposes or as an authorized holding. He may also construct water-races, dams, tramways, etc. Prospecting areas and claims are of various dimensions, and are held conditionally on being worked continuously.

(ii) *Gold-Mining Leases.* A gold-mining lease is granted for a period of 21 years, with the right of renewal for a further 21 years, and may contain an area of 24 acres. The rental is 5s. per acre for the first year, and £1 per acre for subsequent years. If the ground has been previously worked and abandoned, a lease may contain 48 acres, and the annual rent be not less than 5s. per acre nor more than £1 per acre. In the former case, not less than 2 men must be employed during the first 12 months, and then 1 man for every 6 acres, and in the latter case 1 man for every 12 acres.

(iii) *Mineral Leases.* The term of a mineral lease is 21 years, renewable for a similar period, and the maximum area allowed is (*a*) for coal, 320 acres, or for the holder of a prospecting area, 640 acres; (*b*) for oil, 48 acres for an ordinary lease, and 640 acres for a reward lease; (*c*) for precious stones, 24 acres; and (*d*) for other minerals, ordinary lease, 48 acres, and lease on abandoned ground, 96 acres. The annual rental per acre is for (*a*) 6d.; (*b*) ordinary lease, 6d., reward lease, a peppercorn for the first 5 years; and (*c*) and (*d*) ordinary lease, 5s., and extended lease not less than 2s. as the Governor may determine. A royalty of 3d. per ton during the first 10 years and of 6d. per ton for the balance of the lease is payable in the case of coal, and, in the case of oil, the royalty is 10 per cent. of the gross value of the output. The labour conditions are for coal and oil, during the first year, 1 man; during the second year, 2 men; and thereafter 3 men for every 60 acres; and for other minerals, 2 men for the first year, and then 1 man for every 6 acres of an ordinary lease, and for every 12 acres of an extended lease.

(iv) *Business Areas.* A holder of a miner's right may take up a business area not exceeding 1 acre in extent, and must occupy the same for carrying on business, but he may obtain exemption from occupation for 6 months, provided that he has effected improvements thereon to the value of £50.

(v) *Residence Areas.* Provided that he occupies the same, a residence area of ¼ acre may be held by the holder of a miner's right. After expending £10 on improvements he may obtain exemption from residence for 6 months.

(vi) *Miners' Homestead Leases.* A miner, resident on a gold or mineral field, may be granted a miner's homestead lease not exceeding (*a*) 20 acres, if within 2 miles of the nearest boundary of any township or suburban area; or (*b*) 500 acres if beyond, at an annual rental, for the first 20 years, of (*a*) 2s. per acre, where the area does not exceed 20 acres; and (*b*) 6d. per acre where such area is exceeded, and thereafter 1s. if demanded. Within 3 years the lessee must fence in the land, and within 5 years must improve it to the value of 10s. per acre.

(vii) *Particulars of Areas Occupied.* The following table gives particulars of operations for the years 1923 to 1927, the figures being exclusive of holdings under miners' rights and mineral oil licences. Of the areas shown as taken up in 1927, the area under lease was 1,511 acres for gold-mining, 3,632 for mining for other minerals, and 49 for miners' homesteads—a total of 5,192 acres. The balance was taken up under licences.

AREAS TAKEN UP UNDER MINING ACTS.—WESTERN AUSTRALIA, 1923 TO 1927.

Particulars.	1923.	1924.	1925.	1926.	1927.
AREAS TAKEN UP DURING YEAR.					
	Acres.	Acres.	Acres.	Acres.	Acres.
Gold-mining	21,722	14,303	12,173	9,418	10,138
Mining for other minerals ..	15,772	11,673	27,994	5,087	15,823
Other purposes	73	311	397	466	178
Total	37,567	26,287	40,564	14,971	26,139
TOTAL AREAS OCCUPIED AT END OF YEAR.					
Gold-mining	24,574	17,759	15,409	13,146	12,862
Mining for other minerals ..	66,036	38,006	73,519	53,681	60,999
Other purposes	37,219	34,783	34,035	34,276	33,584
Total	127,829	90,548	122,963	101,103	107,445

6. **Tasmania.**—(i) *Holdings under Miners' Rights.* A miner's right is issued to any person at a fee of 5s. for a year, expiring on the 31st December next after the date of issue, and entitles the holder to take possession of Crown lands and to mine thereon, also to construct water-races, build a residence thereon, etc. An ordinary claim for a single holder contains ½ acre.

(ii) *Prospectors' Licences.* A prospector's licence, issued at a fee of 10s. for a year ending on the 31st December, empowers the licensee to take up a claim for the purpose of prospecting for gold and minerals. Such claim may be an ordinary claim with an area of up to 40 acres, or an extended claim up to 320 acres, and both must be worked continuously.

(iii) *Gold-mining Leases.* Any person may be granted a gold-mining lease of any Crown lands for a period of 21 years, renewable for a further 21 years. Reward leases may be granted to discoverers of gold, and, under certain circumstances, special leases may be issued. The maximum area allowed is 40 acres, and the rent is 10s. per acre per annum. At least £2 per acre must be expended annually in mining operations or in works connected therewith.

(iv) *Mineral Leases.* Mineral leases are also issued for a period of 21 years, renewable as in the case of gold-mining leases. The maximum area is—(*a*) for coal or oil, 640 acres; and (*b*) for other minerals, 80 acres. The annual rent per acre is—(*a*) for oil, 1s.;

(*b*) for coal, 2s. 6d.; and (*c*) for other minerals, 5s. At least £2 per acre must be expended annually. No royalty is charged, except on oil, for which it is fixed at 5 per cent. of the gross value of all crude oil obtained after the first 50,000 gallons.

(v) *Leases and Licences Issued and Areas Occupied.* During the year 1927, the number of leases issued was 365, of which the more important were 21 for gold-mining, covering 276 acres; and 188 for tin, covering 6,263 acres. Four licences to search for coal and oil were also granted. The following table gives particulars of operations for the years 1923 to 1927:—

AREAS TAKEN UP UNDER MINING ACTS.—TASMANIA, 1923 TO 1927.

Particulars.	1923.	1924.	1925.	1926.	1927.
AREAS TAKEN UP DURING YEAR.					
	Acres.	Acres.	Acres.	Acres.	Acres.
Gold-mining	1,074	1,094	947	605	155
Mining for other minerals ..	12,884	11,362	8,911	15,819	16,579
Licences to search for coal or oil	33,473	21,120	13,910	1,920	890
Other purposes	104	196	414	337	882
Total	47,535	33,772	24,182	18,681	18,506
TOTAL AREAS OCCUPIED AT END OF YEAR.					
Gold-mining	1,687	1,829	1,340	870	749
Mining for other minerals ..	37,662	32,498	33,695	35,102	37,169
Licences to search for coal or oil	34,761	39,168	14,130	10,660	5,090
Other purposes	3,517	2,697	2,868	2,834	2,854
Total	77,627	76,192	52,033	49,466	45,862

7. **Northern Territory.**—(i) *General.* Mining generally is governed by the Northern Territory Mining Act passed by the South Australian Legislature in 1903, but special Ordinances have since been promulgated by the Commonwealth respecting tin-dredging, mining for mineral oil and coal and encouragement of mining.

(ii) *Holdings under Miners' Rights.* The fee for a miner's right is 5s. for 12 months from the date of issue, and a holder thereof is entitled to occupy Crown lands for mining purposes, to construct races, to divert water, to reside on his holding, etc.

(iii) *Gold-mining Leases.* The area of a gold-mining lease must not exceed 40 acres, and the term is 42 years, renewable for a further 21 years. The rent must not be less than 1s. per acre per annum. A royalty of 6d. in the £ of the net profits must be paid, and one man must be kept constantly employed for every 10 acres, unless exemption is obtained.

(iv) *Mineral Leases.* Mineral leases may be granted in blocks not exceeding 80 acres each, but no person may hold more than 640 acres altogether, nor more than 320 acres in contiguous blocks. A mineral lease is issued for a term not exceeding 99 years, and the rent and royalty are the same as in the case of a gold-mining lease. One man for every 20 acres must be constantly employed during 9 months in each year.

(v) *Tin-dredging Leases.* These leases are issued for a term not exceeding 21 years at a rental of 1s. per acre per annum. The area must not exceed 1,000 acres, and the lessee must, after the first 12 months, keep continuously employed thereon either (*a*) not less than 1 man of European race or extraction for every 25 acres; or alternatively (*b*) fully-manned machinery of a value of not less than £500 for every 100 acres.

(vi) *Mineral Oil and Coal Licences.* A licence to search for mineral oil or coal, or for both, may be granted over an area not exceeding 1,000 square miles for a period of 5 years on payment of an annual fee of £10. At least 4 white men must be employed for not less than 6 months in each year. A holder of a mineral oil licence who discovers payable mineral oil on the land held under his licence has a preferential right to a mineral oil lease of 160 acres, together with a reward area of 640 acres thereon. A discoverer of coal in payable quantities has a preferential right to an area of 640 acres as a coal lease.

(vii) *Mineral Oil and Coal Leases.* Leases may be granted for a period of 21 years, renewable for a further 21 years, for mining for mineral oil or coal, the maximum areas being (*a*) for mineral oil, 160 acres; and (*b*) for coal, 640 acres. In the case of mineral oil, the annual rent is 1s. per acre, and a royalty of 5 per cent. on the gross value of all crude oil obtained is payable; the lessee must also work the land to the satisfaction of the Minister. In the case of coal, the rent and conditions are fixed by regulation.

(viii) *Business Licences.* A business licence is issued at the prescribed fee, and authorizes the holder to occupy on a gold-field, for the purpose of residence and carrying on his business, so much Crown land as is fixed by the Warden who issues the licence.

(ix) *Garden Licences.* The Warden may grant licences to occupy land upon any gold field or mineral field to any person for the purpose of growing fruit or other garden produce. The conditions as to rent, etc., are as prescribed, but the area must not exceed 20 acres.

(x) *Leases Issued and Areas Occupied.* (*a*) *North Australia.* During 1926–27, 7 gold-mining blocks with an area of 130 acres, and 15 mineral blocks with an area of 730 acres were taken up, but no mining leases were issued. At the 30th June, 1927, there existed 16 mineral leases for 531 acres, 7 gold-mining leases for 116 acres, and protected mining lease applications for 29 blocks covering 973 acres. In addition, 37 exclusive prospecting licences for alluvial tin ore covering approximately 143½ square miles were issued.

(*b*) *Central Australia.* During 1926–27, 2 gold-mining blocks with an area of 40 acres and 12 mineral blocks (400 acres) were taken up, but no mining leases were issued. At the 30th June, 1927, 16 gold-mining leases (640 acres); protected gold-mining lease applications for 23 blocks (740 acres); and 29 protected mineral leases (990 acres) were in existence.

8. **Summary.**—The following table shows the areas under leases and licences for mining purposes and the total areas occupied for mining purposes for the years 1923 to 1927:—

CROWN LANDS, LEASES AND LICENCES FOR MINING PURPOSES, 1923 TO 1927.

Year.	N.S.W.	Victoria.	Q'land. (*a*)	S. Aust. (*a*)	W. Aust. (*a*)	Tas. (*a*)	Total.
AREAS FOR WHICH LEASES AND LICENCES ISSUED DURING YEAR.							
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1923 ..	40,143	9,207	67,754	610,377	37,567	47,535	812,583
1924 ..	28,492	8,247	115,524	511,656	26,287	33,772	723,978
1925 ..	99,813	4,832	52,159	311,148	40,564	24,182	532,698
1926 ..	57,439	10,234	16,105	261,967	14,971	18,681	379,397
1927 ..	30,485	17,155	295,677	214,485	26,139	18,506	602,447
TOTAL AREAS OCCUPIED AT END OF YEAR.							
1923 ..	307,336	47,361	444,586	653,899	127,829	77,627	1,658,638
1924 ..	299,688	43,216	499,058	586,025	90,548	76,192	1,594,727
1925 ..	390,193	41,765	455,730	368,922	122,963	52,033	1,431,606
1926 ..	533,358	30,333	422,595	310,663	101,103	49,466	1,447,518
1927 ..	363,575	41,078	657,338	258,855	107,445	45,862	1,474,153

(*a*) Exclusive of lands held under miners' rights only.

§ 8. Settlement of Returned Soldiers and Sailors.

1. **General.**—Information in regard to the methods adopted in each State for providing land for the settlement of returned soldiers and sailors, together with the conditions under which such land could be acquired, is given in preceding issues of the Official Year Book (see No. 18, pp. 187–189), but limits of space preclude its repetition herein.

Particulars respecting the position of soldier settlement in each State at the latest available date are, however, given in the sub-sections immediately following.

2. **New South Wales.**—At the 30th June, 1927, the area set apart exclusively for soldiers was 9,620,723 acres, of which 1,898,108 acres comprised acquired land. The number of soldiers settled was 9,425, of whom 2,635 subsequently transferred, forfeited, or surrendered their holdings. The area of the farms held at that date was 8,553,779 acres, of which 6,653,263 acres were Crown lands (including 4,304,044 acres in the Western Division taken up under the Western Lands Act), 1,841,859 acres of acquired lands, and 58,657 acres within Irrigation Areas.

3. **Victoria.**—At the 30th June, 1927, the area acquired or set apart for soldier settlement was 2,331,536 acres, of which 1,756,004 acres comprised private land purchased at a cost of £13,311,507. The number of farms allotted was 8,404, containing 2,179,426 acres.

4. **Queensland.**—At the 30th June, 1927, the area acquired or set apart for soldier settlement was 602,356 acres, of which 41,101 acres comprised private land, purchased at a cost of £270,480. The number of farms allotted was 1,416, containing 549,562 acres. Some of these selections were acquired under the ordinary provisions of the Land Act, and do not include areas specially set apart for soldiers.

5. **South Australia.**—At the 30th June, 1927, the area acquired or set apart for soldier settlement was 2,915,660 acres, of which 1,562,578 acres comprised private land purchased at a cost of £4,355,092. The number of farms allotted was 2,754, containing 2,663,663 acres.

6. **Western Australia.**—At the 30th June, 1927, the area of land acquired or set apart for soldier settlement was 14,287,643 acres, of which 345,110 acres comprised private land purchased at a cost of £605,076. The number of farms allotted was 1,134, containing 14,287,643 acres. Assistance had been given to 5,212 returned soldiers and the Agricultural Bank held 4,721 properties as security for advances. The area held, including pastoral leases, is approximately 25,864,000 acres, and advances approved amount to £6,452,995.

7. **Tasmania.**—At the 30th June, 1927, the area acquired or set apart for soldier settlement was 333,100 acres, of which 268,209 acres comprised private land purchased at a cost of £2,010,225. The number of farms allotted was 1,966, containing 323,175 acres.

8. **Summary.**—The following table gives a summary of the area acquired, the purchase price thereof, and the number and area of farms allotted in all the States to the 30th June, 1927 :—

SOLDIER SETTLEMENT.—AREAS ACQUIRED AND ALLOTTED AT 30th JUNE, 1927.

Particulars.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Area acquired or set apart—								
(i) Private land acquired ..	acres	1,898,108	1,756,004	41,101	1,562,578	345,110	268,209	5,871,110
(ii) Crown lands set apart ..	"	7,722,615	575,532	561,255	1,353,082	13,942,533	64,891	24,219,908
Farms, etc., allotted	No.	(a) 6,133	8,404	1,416	2,754	1,134	1,966	21,807
	acres	8,558,779	2,179,426	549,562	2,663,663	14,287,643	323,175	28,562,248
Price paid by Government for private land acquired ..	£	7,897,448	13,311,507	270,480	4,355,092	605,076	2,010,225	28,449,828

(a) Farms occupied.

§ 9. Tenure of Land by Aliens.

Information regarding the terms and conditions under which land can be held by aliens is contained in previous issues of the Official Year Book (see No. 18, pp. 190–1), but limits of space preclude its repetition in the present issue.

§ 10. Advances to Settlers.

1. New South Wales.—(i) *General.* Advances to settlers are effected through the Rural Bank Department of the Government Savings Bank, and may consist of either (*a*) overdraft repayable on demand; or (*b*) long-term loan for a period up to 31 years repayable by equal half-yearly instalments, including principal and interest, on freehold lands or any tenure under the Crown Lands Acts; or (*c*) advances on purchase of farms. Advances for the purchase of wire-netting are made under the provisions of the Pastures Protection Act, advances to soldier settlers under the Returned Soldiers Settlement Acts, and advances for the sinking of shallow bores on irrigation areas are made by the Water Conservation and Irrigation Commission.

(ii) (*a*) *Government Savings Bank of New South Wales—Rural Bank Department.* Advances are made by the Rural Bank to eligible applicants in the following ways:—(1) Long-term loans repayable by equal half-yearly instalments, including interest and part of the principal, spread over terms up to 31 years. (2) Fixed loans for definite terms not exceeding five years, during which interest only is payable, the loan being repayable at the end of the term. (3) Overdrafts on current account, interest being charged on the daily balance. Such accounts will be operative by cheque and may be overdrawn up to the limit fixed in each case. (4) A combination of the above giving the advantages of each.

(*b*) *Long-term Loans and Fixed Loans.* The security for loans under this heading must be first mortgage of land, either Freehold (Old System or Torrens Title) or any of the tenures created by the Crown Lands Acts. Stock, plant, machinery, crops, etc., are not acceptable security for these classes of loans.

Advances may be obtained—(1) To pay off existing encumbrances on, or to purchase the land offered as security. (2) To make improvements on the land, or to improve and develop or utilize the agricultural or pastoral resources of the land, or to enable the applicant to carry on agricultural or pastoral pursuits. (3) To build a home upon the land. (4) To pay off money owing to the Crown in respect of the land.

Advances are limited to a maximum amount of £2,000. Advances on Freeholds or any certificated tenures under the Crown Lands Acts will not exceed two-thirds of the Bank's valuation of the security, whilst on uncertificated tenures under the Crown Lands Acts advances will not exceed three-fourths of the Bank's valuation of the improvements thereon, nor two-thirds of the sale value of the security as determined by the Bank's Valuator. Advances on Orchard and/or Poultry Farm securities will be on a more conservative basis. At present the rate of interest for long-term and fixed loans is 6½ per cent. per annum.

(*c*) *Overdrafts.* Overdrafts on current account must, under the Bank Act, be granted only to agricultural or primary producers, or to persons carrying on industries immediately associated with rural pursuits. As the objects of the Rural Bank are to promote settlement, and assist primary production, the purpose for which overdrafts are required must come within the scope of those objects.

For overdrafts the Commissioners prefer as the principal security land, either Freehold (Old System or Torrens Title) or any of the tenures under the Crown Lands Acts, but any other security may be submitted as collateral. On land the limit of advance will be the same as for long-term loans, but a larger margin will generally be required for other classes of security. Interest at 6½ per cent. will be charged on the daily balance.

(*d*) *Advances to Facilitate Subdivision of Private Estates under Section 64—Government Savings Bank Act* 1906. The Commissioners, through the Rural Bank Department, are prepared to finance to the extent hereinafter set out, the subdivision of private estates suitable for Closer Settlement, the title to which is either Freehold under the Real Property Act or Certificated Conditional Purchase.

It is essential that estates offered for subdivision should, from the quality of soil, average rainfall and distance from existing railway line or shipping port (not exceeding 15 miles), be suitable for closer settlement and approved as such by the Land Settlement Board.

If the proposition is satisfactory, the Commissioners will issue certificates under Section 64 of the Bank Act stating the amount they are prepared to advance on each farm, subject to the conditions specified therein. If these certificates are used as the basis of negotiations between buyer and seller, the parties will know before committing themselves to a contract the amount they can expect from the Rural Bank by way of an advance and the conditions attaching thereto.

The maximum advance that may be made on a fully improved farm will not exceed 66⅔ per cent. of the Bank's value. If a farm is not fully improved. further improvements will be prescribed—to be effected by the purchaser at his own expense—and in these cases the maximum advance will not exceed 80 per cent. of the present value, or 66⅔ per cent. of the value when the prescribed improvements are made, whichever is the less.

The maximum sum that may be advanced by the Bank on any farm will be £3,000. Interest will be at the rate of 6¼ per cent. Loans will be repayable by equal half-yearly instalments of interest and part principal over a term of 31 years.

(iii) *Returned Soldiers' Settlement Act.* Advances up to £625 may be made to returned soldiers for prescribed purposes, principal and interest being repayable on easy terms.

(iv) *Amount of Advances.* The following table gives particulars respecting advances etc., to 30th June, 1927 :—

ADVANCES TO SETTLERS.—NEW SOUTH WALES, 1926-27.

Particulars.	Advances made during 1926–27.	Total Advances at 30th June, 1927.	Amount outstanding at 30th June, 1927.
	£	£	£
Government Savings Bank Advances	2,590,779	18,201,924	10,529,995
Soldier Settlement Advances	160,128	7,041,368	4,587,780
Advances for Purchase of Wire Netting	65,899	793,806	312,677
Advances to Necessitous Farmers ..	87,368	2,983,659	296,152
Advances to Civilian Settlers on Irrigation Areas	74,517	523,919	291,375
Shallow Boring Advances	57,349	414,097	176,765
Total	3,036,040	29,958,773	16,194,744

2. **Victoria.**—(i) *General.* The principal institution which advances money to settlers is the State Savings Bank. The Closer Settlement Board is also authorized to make such advances, and the Government may lend money to Cool Stores Trusts, and, under special drought circumstances, make advances to settlers for the purchase of seed, cattle, etc., for which purpose separate Acts have been and are passed from time to time as required.

(ii) *State Savings Bank Act.* The *Crédit Foncier* Department of the State Savings Bank was created for the purpose of making advances to settlers and others, and is authorized to borrow up to £10,000,000 for that object. The Commissioners may lend money to farmers, etc., on the security of any agricultural, horticultural, viticultural, or pastoral land held in fee-simple or on conditional purchase. Such loans are secured by a first mortgage on the property, and are payable either in cash or by debentures or mortgage bonds, at the option of the Commissioners. No advance may be less than £50, or more than £2,000, and each advance is limited to two-thirds, or, in the case of returned soldiers, to three-quarters, of the value of the land, and, in the case of a conditional purchase, this amount is reduced by the amount of rent outstanding. Where improvements are effected on a conditional purchase lease to the amount of £1 per acre at least, and the value of the land and improvements exceeds £2 per acre, an additional advance, not exceeding 15s. per acre, may be made. In the case of land which has acquired a special increase of value by reason of being cultivated as vineyards, hop-grounds, orchards, etc., advances may be made on the following terms :—(*a*) the total amount which may at any time be advanced must not exceed £100,000 ; (*b*) the amount of allowable advance may be increased by one-fourth, but not to a greater amount than £30 per acre ; and (*c*) no advance may be made for a longer period than 15 years. Repayment of advances must be made in 63 half-yearly instalments of principal and interest, a slight reduction in the amount being made in the case of returned soldiers. The Commissioners may also advance money to companies in country districts for the erection of works for freezing, packing, or storing any commodities which are included in the Primary Products Act or in the Fruit Act, provided that shares equal in value to not less than two-thirds of the proposed expenditure have been taken up, and one-third thereof paid for in cash. The loan is granted upon such terms and conditions as the Commissioners may think fit.

(iii) *Closer Settlement Act.* The Closer Settlement Board may advance money to (*a*) lessees of workmen's homes and agricultural labourers' allotments in aid of the cost of fencing and erecting dwelling-houses; (*b*) lessees of Crown land for carrying on farming or grazing pursuits, or for adding to improvements; (*c*) municipalities, for making roads to any land acquired by the Board; and (*d*) owners of land for the purchase of wire-netting. An advance may not exceed £625, or, in the case of land which is suitable mainly for grazing, £1,000, and is repayable in 40 half-yearly instalments, with 5 per cent. interest. Where a lessee has, after not less than 6 years, obtained his compliance certificate or Crown grant, the amount of loan may be increased to £1,000, but must not exceed 60 per cent. of the value of the improvements and amount of purchase-money paid.

(iv) *Discharged Soldiers' Settlement Act.* The Closer Settlement Board may advance to a discharged soldier up to £625, or, if he is the owner or lessee of land in the mallee country or of grazing land only, up to £1,000. The rate of interest is fixed by the Minister, and is 3½ per cent. for the first year, increasing by ½ per cent. annually until the rate determined is reached. Repayment is as prescribed.

(v) *Primary Products Advances Act.* A company registered under the Companies Act, or a society registered under the Provident Societies Act, which is undertaking the establishment of abattoirs and freezing works, or cool storage for fish, or dried or canned fruit, or jam factories, tobacco-curing, or fruit-works, may be granted by the State Savings Bank a loan for the purpose of constructing such works. No loan may be granted unless at least one-third in number and value of the shareholders are persons engaged in the production of the primary products supplied to the company and full particulars of the proposed undertaking are furnished. The loan is repayable at such times and with such interest as the Commissioners may determine, the property must be mortgaged to the Bank, and a sum, not exceeding 5 per cent. of the value of the buildings, etc., paid annually into a depreciation fund.

(vi) *Fruit Act.* A Cool Stores Trust may be granted a loan by the Treasurer for the purchase of land and for the erection of a cool store thereon. Such loan must be a first charge on the property and revenue of the Trust, be for an agreed term of years, and provide for repayment with interest at 4½ per cent. in 40 half-yearly instalments. The State Savings Bank Commissioners may also advance money to a company for the purpose of constructing fruit-works, provided that at least one-third in number and value of the shares are held *bona fide* by shareholders being owners or occupiers of orchards within the locality. The terms of the loan are the same as those under the Primary Products Advances Act.

(vii) *Amount of Advances.* The following table gives particulars respecting advances etc., to 30th June, 1927:—

ADVANCES TO SETTLERS.—VICTORIA, 1926–27.

Authority Making Advances.	Advances made to—	Advances made during 1926–27.	Total Advances at 30th June, 1927.	Amount Outstanding at 30th June, 1927.
		£	£	£
State Savings Bank	Civilians	457,808	7,092,190	3,117,784
	Discharged soldiers ..	75,550	489,820	384,714
Closer Settlement Board	Closer Settlement settlers	1,545,883	9,840,510	6,949,104
	Soldier settlers ..	432,051	22,189,665	18,417,966
Treasurer	Cool stores, canneries, etc.	..	610,182	449,331
Total	.. .. ..	2,511,292	40,222,367	29,318,899

3. Queensland.—(i) *General.* The principal institution which makes advances to settlers is the Agricultural Bank, established by the Agricultural Bank Act of 1923. Advances are also made by the Bank on behalf of the Minister for Lands under the Discharged Soldiers' Settlement Acts. In addition, assistance is granted by the following authorities :—Irrigation Commissioner: Department of Public Lands, in respect to water facilities and wire-netting; Department of Agriculture and Stock, in respect to seed wheat and drought relief.

(ii) *Agricultural Bank Act.* The Agricultural Bank makes advances on the security of a first mortgage over property which is used for agricultural, dairying, grazing, horticultural or viticultural pursuits, poultry or pig raising, or other approved rural pursuits. Further security may be required by way of stock mortgage, bill of sale, lien on crops, etc. The limit of advance to one person is £1,700, and, subject to the succeeding paragraphs, no advance may exceed 16s. in the £1 of the fair estimated security value of the land with its permanent improvements, together with those, if any, to be made by means of the advance applied for.

The purposes for which advances are granted are as follow :—(*a*) Payment of liabilities already existing with respect to the land or payment of the balance of any purchase money in respect of the purchase of the land or any stock, machinery, or implements therefor; (*b*) effecting improvements on the land; (*c*) purchase of stock, machinery, or implements; (*d*) generally in respect of agricultural, dairying, grazing, horticultural, or viticultural pursuits, poultry or pig raising, or other rural pursuits on the land; (*e*) relief in case of drought, flood, tempest, fire, or other adverse conditions or happenings beyond the control of the borrower; (*f*) not exceeding £400 for unspecified purposes in connexion with the land, provided that the applicant is a *bona fide* settler residing on and working the land as farm land.

Advances to beginners on the land may be granted within the before-mentioned limit of £1,700 to the full value of the improvements proposed to be made for any one or more of the following objects, but not exceeding in the aggregate £500 at that special rate :—Buildings, ringbarking, clearing, fencing, draining, water conservation (including a well or bore together with lifting power), dairy house and yards, accommodation for pigs, silos, haysheds.

The term for repayment of any advance shall be the term fixed by the Bank, not exceeding 20 years, exclusive of any initial period allowed by the Bank (not exceeding 5 years) during which interest only is payable.

After the expiration of the initial interest-only period, the loan is repayable by equal half-yearly instalments of an amount sufficient to redeem the loan including interest, within the term of years fixed. Advances made on the security of terminating Crown leaseholds must be repaid within a term not later than the date upon which the lease will expire. Special advances for the purchase of dairy stock, sheep, pigs, dairying plant, etc., may be made to settlers on the security of a chattel mortgage over such purchases.

Provision is made for advances under easy terms to groups of settlers for the co-operative purchase of necessary machinery; such groups must be registered as co-operative companies or associations. The limit of advance in these cases is £1,700 to any one company or association, and must not exceed two-thirds of the cost of the machinery.

Mortgage advances are made under prescribed conditions to co-operative companies and associations for factories and other works for the manufacture, storage, or treatment of primary produce and resultant products.

The rate of interest on any loan under the Agricultural Bank Act is fixed by the Bank when the application for the advance is approved; the present rate is 5 per cent. per annum, except in cases where the loan is discharging liabilities on the land offered as security, when the rate is 6 per cent.

The advances outstanding under the Agricultural Bank Act, as set out in the table below, include advances originally made by the Bank's predecessors under the following legislation and taken over under The Agricultural Bank Act of 1923 :—The Agricultural Bank Act of 1901; The Queensland Government Savings Bank Act of 1916; The State Advances Act of 1916; The Co-operative Agricultural Production and Advances to Farmers Acts 1914 to 1919.

(iii) *Discharged Soldiers' Settlement Act.* Advances may be made by the Minister to discharged soldiers who are owners of land in fee-simple or holders of land under tenure from the Crown. Such advances may be made for the purposes of (*a*) the payment of purchase-money; (*b*) the payment of existing liabilities; (*c*) making improvements; (*d*) purchasing live stock, machinery, fruit trees, etc.; or (*e*) any other approved purpose. The maximum term of advance is 33 years exclusive of an initial period of 7 years during which interest only is payable. The rate of interest for the first year is 3½ per cent., and it increases annually by ½ per cent. up to a maximum of 5 per cent.

(iv) *Amount of Advances.* The following table gives particulars of advances, etc., to 30th June, 1927:—

ADVANCES TO SETTLERS.—QUEENSLAND, 1926-27.

Act under which Advances were made.	Advances made during Year 1926–27.	Total Advances made to 30th June, 1927.	Amount Outstanding at 30th June, 1927.
	£	£	£
Agricultural Bank Act	408,348	4,699,386	2,488,131
Discharged Soldiers' Settlement Act (*a*)	14,356	2,350,453	1,630,292
Water Facilities	19,276	33,025	32,431
Wire Netting	28,781	553,371	426,251
Seed Wheat	(*b*) 5,961	(*c*)37,798	13,006
Drought Relief	...	67,401	50,978
Total	476,722	7,741,434	4,641,089

(*a*) Includes advances to group settlements through the Land Department as well as advances through the Agricultural Bank. (*b*) Advances paid on account of 1925–26 season to Queensland Wheat Board. (*c*) Includes accrued interest to 30th June, 1927.

4. South Australia.—(i) *General.* Advances may be made to settlers and others for the purpose of discharging mortgages, making improvements, etc., under the provisions of the State Bank Act 1925, which are briefly summarized hereunder. Loans may be made under the Loans for Fencing Act and the Vermin Act for the purchase of fencing materials in vermin-infested districts. Advances may be made to homestead block-holders (*a*) for erecting buildings; or (*b*) for making improvements on their land. A loan must not exceed in the case of (*a*) the cost of existing improvements, and in the case of (*b*) one-half the value of the improvements to be effected; and in no case may a loan exceed £50. Repayment is to be made in 20 equal annual instalments at the rate of £7 7s. 2d. per cent. of the amount advanced. The State Bank may make advances to any settler on the security of his land and improvements (*a*) for making improvements, up to the estimated value of his lease or agreement and improvements, not exceeding £600, and up to but not exceeding three-fourths of such value in excess of £600; or (*b*) for stocking his holding, up to £200; or (*c*) for discharging an existing mortgage, up to three-fourths of the value of his lease or agreement and improvements; or (*d*) for any other purpose, up to the same amount. Repayment of a loan extends over a period of years as is fixed by the Bank at the time of making the advance. Interest only is payable during a period—in no case exceeding five years—as fixed by the Bank, and the advance is repaid by equal half-yearly instalments, not exceeding 70, together with simple interest on the balance outstanding.

(ii) *State Bank Act 1925.* Under this Act the State Bank of South Australia makes advances under prescribed conditions to farmers and other producers, to local authorities, to persons possessed of the necessary securities, and in aid of industries. No single advance may exceed £5,000. The Bank and the borrower may agree upon the term of years, not exceeding 42, over which repayment may be spread, as well as the interest to be paid. The Bank may, on the security of a mortgage on the property, make loans to any registered co-operative society, three-fourths of the members of which are engaged in or are about to be engaged in rural production, for purposes prescribed.

(iii) *Irrigation Act.* Settlers under this Act are entitled, under prescribed conditions, to loans under the Advances to Settlers on Crown Lands Act, as well as under the Irrigation Act, but not exceeding £600 under both Acts. Advances may be made only on the security of a first mortgage. During the first 5 years interest only is payable, but thereafter the advance must be repaid in 70 equal half-yearly instalments, with interest.

(iv) *Discharged Soldiers' Settlement Act.* Advances are made to soldier settlers for prescribed purposes on liberal terms in regard to payment of principal and interest.

(v) *Agricultural Graduates Land Settlement Act.* Under the provisions of this Act, the Minister may (*a*) purchase land with a view to the settlement thereon of agricultural graduates, the value of which land, with improvements, must not exceed £3,000 for each graduate, and is repayable with interest; (*b*) the State Bank may advance to any agricultural graduate settler up to £500 for the purpose of purchasing seeds, implements, stock, etc., such advance being repayable on easy terms.

(vi) *Amount of Advances.* The following table gives particulars respecting advances, etc., to 30th June, 1927 :—

ADVANCES TO SETTLERS.—SOUTH AUSTRALIA, 30th JUNE, 1927.

Particulars.	Advances made during 1926–27.	Total Advances at 30th June, 1927.	Amount outstanding at 30th June, 1927.
	£	£	£
Department of Lands and Survey—			
Advances to soldier settlers	216,524	5,166,853	4,122,197
Advances to settlers for improvements ..	16,007	654,173	306,568
Advances under Vermin and Fencing Acts	75,564	1,042,759	332,609
Advances to blockholders	..	41,451	42
Advances for sheds and tanks	4,103	75,692	64,380
Advances in drought-affected areas ..	3,041	774,426	46,876
Advances under Loans to Producers Act ..	14,763	169,755	164,163
Advances under Closer Settlement Acts ..	48,747	2,364,220	1,629,698
Advances under Agricultural Graduates Settlement Act	..	3,913	3,857
State Bank of South Australia	985,910	15,999,702	9,693,242
Irrigation Commission—			
Civilians	12,446	208,459	116,742
Soldier settlers	53,553	1,895,119	1,597,252
Total	1,430,658	28,396,522	18,077,626

5. **Western Australia.**—(i) *General.* Advances to settlers are made by the Agricultural Bank, which was established in 1895. Special advances are also made to returned soldiers.

(ii) *Agricultural Bank.* This Bank makes advances to a limit of £2,500 on the security of a first mortgage to persons engaged in agricultural pursuits. The borrower must pay the interest on the amount advanced for the first 5 years, and after the expiration of that term the advance with interest must be repaid within 25 years in half-yearly instalments. The interest is at such rates as may be prescribed, but if over 5 per cent. per annum, must not exceed by more than 1 per cent. the rate of interest paid by the Bank on funds raised by the Bank.

(iii) *Amount of Advances.* The following table gives particulars respecting advances, etc., to 30th June, 1927 :—

ADVANCES TO SETTLERS.—WESTERN AUSTRALIA, 1926-27.

Particulars.	Year ended—	Advances made during Year 1926–27.	Total Advances at 30th June, 1927.	Amount outstanding at 30th June, 1927.
		£	£	£
Agricultural Bank advances ..	30.6.27	380,144	6,110,332	3,711,019
Soldier settlement advances ..	30.6.27	139,152	5,709,018	5,048,599
Advances to rural industries ..	30.6.27	87	24,791	21,316
Advances to assisted settlers ..	31.3.27	864,286	11,373,406	1,880,286
Total	..	1,383,669	23,217,547	10,661,220

6. **Tasmania.**—(i) *General.* Advances to farmers and producers may be made under the State Advances Act, to closer settlement settlers under the Closer Settlement Act, to fruit-growers formed into a registered company under the Advances to Fruit-growers Act, and to returned soldiers under the Returned Soldiers Settlement Act.

(ii) *State Advances Act.* The Agricultural Bank of Tasmania, constituted under this Act, is authorized to borrow up to £370,000 on debentures or stock for the purpose of advancing money to farmers and other primary producers who own land in fee-simple or under purchase from the Crown on credit. Advances are secured on first mortgages, and may be made for any of the purposes prescribed. The trustees reserve the right to fix the period for repayment of any loan with a maximum term of 30 years. Interest at 6½ per cent. and instalment of principal are payable half-yearly.

(iii) *Closer Settlement Act.* Under this Act the Minister may make advances to lessees in aid of the cost of improvements. The total amount advanced may not exceed £ for £ of the sum expended by the lessee in such improvements. Loans are repayable by equal half-yearly instalments with interest, not exceeding 7 per cent., extending over a period not exceeding 21 years.

(iv) *Advances to Fruit-growers Act.* The Minister may make advances for prescribed purposes to registered companies on a first mortgage on freehold land or on a lien on other property. Generally, the amount of advance must not exceed 75 per cent. of the value of the land or plant, but, in the case of a company desiring to purchase grading machinery, it must not exceed 50 per cent. of the value thereof. Liberal terms have been arranged for repayment of principal and interest.

(v) *Returned Soldiers Settlement Act.* Advances up to £625, on easy terms as regards repayment, may be made to discharged soldiers to assist in making improvements and purchasing requisites. The Minister may in certain cases remit wholly or in part the payment of rent or instalments on the purchase-money.

A returned soldier, who has not exercised his option of acquiring a free selection, and who is already a selector of land on credit purchase, is entitled to a remission of his instalments up to £100 if he made application for same before 31st March, 1922.

(vi) *Amount of Advances.* The following table gives particulars respecting advances, etc., to 30th June, 1927 :—

ADVANCES TO SETTLERS.—TASMANIA, 30th JUNE, 1927.

Authority making Advances.	Advances made to —	Advances made during 1926–27.	Total Advances to 30th June, 1927.	Amount outstanding at 30th June, 1927.
		£	£	£
Agricultural Bank ..	Settlers ..	36,361	240,295	146,446
Minister for Lands ..	Soldier Settlers ..	5,130	676,795	295,888
,, ..	Closer Settlers ..	1,642	24,941	12,223
,, ..	Fruit Growers ..	..	1,897	1,310
Total ..	.. .. ..	43,133	943,928	455,867

7. **North Australia and Central Australia**—(i) *Wire and Wire Netting Act* 1927. The Advances to Settlers Act 1923 has been superseded by the Wire and Wire Netting Act 1927, which, subject to the regulations, provides that the Minister for Markets may out of moneys paid into a "Wire and Wire Netting" Trust Account, make advances to settlers in North Australia and Central Australia for the purchase of wire and/or wire netting.

Applicants must offer security for the repayment of advances and fulfil the prescribed conditions.

An advance cannot be made on unimproved land or on land on which the rent is overdue.

(ii) *Encouragement of Primary Production Ordinance* 1927. Under this Ordinance the Primary Producers Board may, out of moneys voted by Parliament, expend such sums as it deems necessary for the carrying out of its powers under this Ordinance, particularly as regards the granting of assistance to producers for the purposes prescribed. Principal and interest are repayable under easy terms.

(iii) *Amount of Advances.* During the financial year 1926–27 the sum of £1,266 was advanced, making the total amount advanced to the 30th June, 1927, £14,500 (approximately). The balance outstanding at 30th June, 1927, including interest, was £8,348.

8. **Summary of Advances.**—The following table gives a summary for each State to the 30th June, 1927 :—

ADVANCES TO SETTLERS.—AUSTRALIA, 30th JUNE, 1927.

State.	Advances made during 1926–27.	Total Advances to 30th June, 1927.	Amount outstanding at 30th June, 1927.
	£	£	£
New South Wales	3,036,040	29,958,773	16,194,744
Victoria	2,511,292	40,222,367	29,318,899
Queensland	476,722	7,741,434	4,641,089
South Australia	1,430,658	28,396,522	18,077,626
Western Australia	1,383,669	23,217,547	10,661,220
Tasmania	43,133	943,928	455,867
North and Central Australia ..	1,266	14,500	8,348
Total	8,882,780	130,495,071	79,357,793

§ 11. Alienation and Occupation of Crown Lands.

1. **General.**—The tables given in the previous parts of this chapter show separately the areas alienated, in process of alienation, or occupied under various tenures. The following tables set out in summarized form the position in regard to the tenure of land in each State, in the Northern Territory, and in the Federal Capital Territory during the last five years for which information is available. The area unoccupied includes roads, permanent reserves, forests, etc. In some cases, lands which are permanently reserved from alienation are occupied under leases and licences, and have been included therein. Lands occupied under leases or licences for pastoral purposes are frequently held on short tenures only, and could thus be made available for settlement practically whenever required.

2. **New South Wales.**—At the 30th June, 1927, of the total area of New South Wales, 21.5 per cent. had been alienated absolutely, 11.5 per cent. was in process of alienation, 57.8 per cent. was held under leases and licences, and the remaining 9.2 per cent. was unoccupied.

The following table gives particulars for each of the last five years :—

ALIENATION AND OCCUPATION OF CROWN LANDS.—NEW SOUTH WALES, 1922-23 TO 1926-27.

Particulars.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27. (a)
	Acres.	Acres.	Acres.	Acres.	Acres.
1. *Alienated.*					
Granted and sold prior to 1862	7,146,579	7,146,579	7,146,579	7,146,579	7,146,579
Sold by auction and other sales, 1862 to date	15,188,819	14,962,345	14,969,185	14,977,762	14,981,897
Conditionally sold, 1862 to date	20,637,146	21,233,270	21,823,491	22,283,707	22,732,824
Granted under Volunteer Land Regulations, 1867 to date ..	172,198	172,198	172,198	172,198	172,198
Granted for public and religious purposes	242,674	244,282	244,850	246,105	249,592
	43,387,416	43,758,674	44,356,303	44,826,351	45,283,090
Less lands resumed or reverted to Crown	2,466,837	2,475,501	2,496,081	2,502,668	2,506,533
Total	40,920,579	41,283,173	41,860,222	42,323,683	42,776,557
2. *In Process of Alienation.*					
Conditional purchases.. ..	18,200,900	18,122,045	18,156,194	19,263,888	19,635,068
Closer settlement purchases ..	2,427,826	2,573,115	2,674,217	2,710,516	2,742,708
Soldiers' group purchase ..	..	410,567	390,396	401,609	400,569
Other forms of sale	..	11,002	14,978	16,621	20,995
Total	20,628,726	21,116,729	21,235,785	22,392,634	22,799,340
3. *Held under Leases and Licences.*					
Total under Lands Department, Water Conservation and Irrigation Commissioner, and Western Lands Commissioners	115,391,357	114,916,852	114,656,643	113,707,215	114,082,488
Mineral and auriferous leases and licences (Mines Department)..	307,336	299,688	390,193	533,358	287,202
Total	115,698,693	115,216,540	115,046,836	114,240,573	114,369,690
4. *Unoccupied* (approximate)	20,788,502	20,420,058	19,893,657	19,079,610	18,087,693

(a) Exclusive of Lord Howe Island, 3,220 acres.

Area of State—198,036,500 acres.

3. **Victoria.**—The total area of the State of Victoria is 56,245,760 acres, of which 45.5 per cent. had been alienated absolutely up to the end of the year 1926; 16.8 per cent. was in process of alienation under deferred payments and Closer Settlement Schemes; 11.2 per cent. was occupied under leases and licences; while 26.5 per cent. was unoccupied.

The following table shows the distribution :—

ALIENATION AND OCCUPATION OF CROWN LANDS.—VICTORIA, 1922 TO 1926.

Particulars.	1922.	1923.	1924.	1925.	1926.
	Acres.	Acres.	Acres.	Acres.	Acres.
1. *Alienated*	24,947,732	25,090,672	25,278,681	25,463,719	25,589,484
2. *In Process of Alienation*—					
Exclusive of Mallee, etc. ..	2,021,372	2,101,155	2,138,684	2,109,685	2,094,085
Mallee Lands	6,345,499	6,241,691	6,330,141	7,129,530	6,761,870
Under Closer Settlement Acts ..	542,978	532,274	532,274	532,727	598,138
Village Settlements	995	861	791	776	755
Total	8,910,844	8,875,981	9,001,890	9,772,718	9,454,848
3. *Leases and Licences held*—					
Under Lands Department ..	9,237,593	9,220,529	8,254,933	6,998,765	6,268,857
Under Mines Department ..	52,866	52,849	52,818	41,765	41,078
Total	9,290,459	9,273,378	8,307,751	7,040,530	6,309,935
4. *Unoccupied Crown Lands* ..	13,096,725	13,005,729	13,657,438	13,968,793	14,891,493

Total area of State—56,245,760 acres.

4. **Queensland.**—The total area of this State is 429,120,000 acres, of which, on the 31st December, 1926, 4.1 per cent. was alienated absolutely ; 1.6 per cent. was in process of alienation ; and 71.3 per cent. was occupied under leases and licences. The remainder (23 per cent.) was either unoccupied or held as reserves, or for roads.

The distribution is shown in the following table :—

ALIENATION AND OCCUPATION OF CROWN LANDS.—QUEENSLAND, 1922 TO 1926.

Particulars.	1922.	1923.	1924.	1925.	1926.
1. *Alienated Absolutely*—	Acres.	Acres.	Acres.	Acres.	Acres.
By Purchase	17,156,804	17,255,176	17,331,516	17,508,804	17,680,393
Without Payment	87,740	87,773	87,909	88,071	88,243
Total	17,244,544	17,342,949	17,419,425	17,596,875	17,768,636
2. *In Process of Alienation* ..	7,833,127	7,358,971	7,150,240	6,966,230	6,802,460
3. *Occupied under Leases and Licences*—					
Pastoral Leases	185,348,400	189,353,840	188,975,840	183,918,080	186,382,240
Occupation Licences ..	34,610,680	34,529,120	35,323,000	32,087,000	28,096,600
Grazing Farms and Homesteads	78,983,282	79,783,557	81,200,031	82,469,364	81,464,121
Scrub Selections	77,283	72,886	69,052	50,812	42,503
Leases—Special Purposes ..	258,706	303,853	362,778	482,773	627,341
Under Mines Department ..	511,137	454,586	508,058	464,731	430,595
Perpetual Lease Selections ..	3,166,134	3,147,890	3,205,349	3,548,169	3,872,890
Auction Perpetual Leases ..	11,249	12,558	13,536	15,098	16,160
Prickly-pear Leases ..	..	..	..	1,296,800	5,077,240
Settlement Farm Leases ..	..	..	..	..	961
Total	302,966,871	307,658,290	309,657,644	304,332,827	306,010,651
4. *Unoccupied*	101,075,458	96,759,790	94,892,691	100,224,068	98,538,253

Total area of State—429,120,000 acres.

5. **South Australia.**—The area of the State of South Australia is 243,244,800 acres, and at the end of the year 1927, 4.8 per cent. was alienated absolutely; 1.4 per cent. in process of alienation; 49.4 per cent. occupied under leases and licences; and 44.4 per cent. unoccupied.

The subjoined table shows the distribution:—

ALIENATION AND OCCUPATION OF CROWN LANDS.—SOUTH AUSTRALIA, 1923 TO 1927.

Particulars.	1923.	1924.	1925.	1926.	1927.
	Acres.	Acres.	Acres.	Acres.	Acres.
1. *Alienated*—					
Sold	10,987,030	11,104,386	11,216,755	11,327,527	11,551,243
Granted for Public Purposes	131,741	132,672	132,689	132,720	132,767
Total	11,118,771	11,237,058	11,349,444	11,460,247	11,684,010
2. *In Process of Alienation* ..	3,123,674	3,270,884	3,397,866	3,442,047	3,489,425
3. *Held under Lease and Licence*—					
Right of Purchase Leases ..	2,081,003	2,038,090	2,005,708	1,968,193	1,920,222
Perpetual Leases	14,956,020	14,944,537	15,041,948	15,150,156	15,221,956
Pastoral Leases	105,984,903	108,796,663	102,871,703	101,123,363	101,056,963
Other Leases and Licences ..	962,985	864,648	1,273,003	1,775,369	1,731,479
Mining Leases and Licences	653,899	586,025	368,922	310,663	258,855
Total	124,638,810	127,229,963	121,561,284	120,327,744	120,189,475
4. *Area Unoccupied*	104,363,545	101,506,895	106,936,206	108,014,762	107,881,890

Total area of State—243,244,800 acres.

6. Western Australia.—The total area of Western Australia is 624,588,800 acres, of which, at the 30th June, 1927, 2.0 per cent. was alienated absolutely; 3.1 per cent. was in process of alienation; while 37.5 per cent. was occupied under leases and licences issued either by the Lands or the Mines Departments. The balance of 57.4 per cent. was unoccupied.

The following table shows the distribution:—

ALIENATION AND OCCUPATION OF CROWN LANDS.—WESTERN AUSTRALIA, 1922-23 TO 1926-27.

Particulars.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	Acres.	Acres.	Acres.	Acres.	Acres.
1. *Alienated Absolutely* ..	10,051,080	10,520.028	10,978,850	11,688,569	12,194,236
2. *In Process of Alienation*—					
Midland Railway Concessions	54,800	54,800	54,800	54,800	54,800
Free Homestead Farms ..	961,492	963,700	938,793	922,761	917,392
Conditional Purchases ..	8,028,588	8,187,635	7,906,971	7,611,664	7,438,441
Selections from the late W.A. Company ..	2,193	2,193	2,143	2,143	5,596
Selections under the Agricultural Lands Purchase Act	565,780	572,410	558,087	537,056	547,580
Special Occupation Leases and Licences	820	820	722	722	300
Homestead or Grazing Leases	7,357,291	7,998,598	8,425,594	9,419,745	10,658,213
Poison Land Leases or Licences	42,275	42,275	40,828	40,004	27,679
Village Allotments ..	27	13	4	4	7
Working-men's Blocks ..	320	157	..	..	116
Total	17,013,586	17,822,601	17,922,942	18,588,898	19,650,124

ALIENATION AND OCCUPATION OF CROWN LANDS.—WESTERN AUSTRALIA, 1922-23 TO 1926-27—*continued.*

Particulars.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
	Acres.	Acres.	Acres.	Acres.	Acres.
3. *Leases and Licences in Force*—					
(i) Issued by Lands Department—					
Pastoral Leases	258,238,151	214,818,111	228,919,930	226,610,576	229,970,629
Special Leases	49,213	40,144	41,873	41,963	43,974
Leases of Reserves ..	2,101,795	2,084,766	2,127,840	2,130,050	2,221,670
Residential Lots ..	5,769	171	145	7,410	7,314
(ii) Issued by Mines Department—					
Gold-mining Leases ..	8,934	8,191	7,444	6,506	6,087
Mineral Leases ..	47,275	48,214	47,500	45,199	44,516
Miners' Homestead Leases	35,828	33,254	32,245	32,575	31,430
(iii) Issued by Forests Department—					
Timber Leases and Concessions	585,110	545,334	545,274	428,318	434,722
Timber Permits ..	1,075,101	1,320,531	1,269,636	1,260,170	1,400,080
Total	262,147,176	218,898,716	232,991,347	230,562,767	234,160,422
4. *Area Unoccupied*	335,376,958	377,347,455	362,695,061	363,748,566	358,584,018

Total Area of State—624,588,800 acres.

7. **Tasmania.**—At the end of the year 1926, 33.4 per cent. of the total area had been alienated absolutely; 3.8 per cent. was in process of alienation; 17.1 per cent. was occupied under leases and licences for either pastoral, agricultural, timber, or mining purposes, or for closer or soldier settlement, or occupied or reserved by the Crown; the remainder (45.7 per cent.) being unoccupied.

The following table shows the distribution:—

ALIENATION AND OCCUPATION OF CROWN LANDS.—TASMANIA, 1922 TO 1926.

Particulars.	1922.	1923.	1924.	1925.	1926.
	Acres.	Acres.	Acres.	Acres.	Acres.
1. *Alienated Absolutely*	5,326,825	5,407,937	5,490,734	5,546,357	5,594,934
2. *In Process of Alienation*	880,410	798,043	729,861	700,000	645,000
3. *Leases or Licences*—					
(i) *Issued by Lands Department*—					
Islands	107,000	107,000	107,000	106,000	112,000
Ordinary Leased Land ..	1,577,653	1,593,000	1,574,000	1,579,000	1,926,100
Land Leased for Timber ..	308,072	272,270	282,673	284,800	290,100
Closer Settlement	93,399	93,000	90,753	93,283	90,000
Soldier Settlement	202,673	192,600	188,652	182,387	178,000
Other Leases	1,000	1,000	1,000	81,000	98,000
(ii) *Issued by Mines Department* ..	49,823	42,866	37,024	52,033	49,992
(iii) *Occupied by Commonwealth and State Departments*	18,000	18,000	18,000	18,000	18,000
(iv) *Reserved for Public Purposes* ..	100,000	100,000	100,000	100,000	100,000
Total	2,457,620	2,419,736	2,399,102	2,416,503	2,862,192
4. *Area Unoccupied*	8,113,145	8,152,284	8,158,303	8,115,140	7,675,874

Total area of State—16,778,000 acres.

8. North Australia and Central Australia.—(i) *North Australia.* The area of North Australia is 183,715,840 acres, of which, at the 30th June, 1927, only 0.26 per cent. was alienated absolutely; 59.42 per cent. was held under leases and licences; while the remaining 40.32 per cent. was unoccupied.

(ii) *Central Australia.* Of the total area of Central Australia, viz., 151,400,960 acres, only 11 acres were alienated absolutely, while of the remainder, 41.64 per cent. was held under leases and licences.

(iii) *Distribution of Tenures.* The following shows the mode of occupancy of areas at 30th June, 1927:—

ALIENATION AND OCCUPATION OF CROWN LANDS.—NORTH AND CENTRAL AUSTRALIA, 1927.

Particulars.	North Australia.	Central Australia.	Total.
	Acres.	Acres.	Acres.
1. Alienated	477,824	11	477,835
2. Leased—			
Right of purchase	..	..	..
Pastoral	80,935,040	29,514,240	110,449,280
Other leases and licences ..	28,220,160	33,532,800	61,752,960
Total	109,155,200	63,047,040	172,202,240
3. Unoccupied	74,082,816	88,353,909	162,436,725
4. Total area	183,715,840	151,400,960	335,116,800

Particulars of the Northern Territory, as a whole, for the five years 1922–23 to 1926–27 are shown hereunder:—

ALIENATION AND OCCUPATION OF CROWN LANDS.—NORTHERN TERRITORY, 1923 TO 1927.

Particulars.	1923.	1924.	1925.	1926.	1927.
	Acres.	Acres.	Acres.	Acres.	Acres.
1. *Alienated*—					
Sold	476,508	476,864	476,864	476,864	477,835
Granted for Public Purposes	48	48	48	48	
Total Alienated ..	476,556	476,912	476,912	476.912	477,835
2. *Leased*—					
Right of Purchase ..	356	..	..	..	..
Pastoral	113,864,720	114,368,266	111,780.746	110,971,146	110,449,280
Other Leases	22,462,896	24,786,088	34,633.960	39,150,051	61,752,960
Total Leases ..	136,327,972	139,154,954	146,414,706	150,121,197	172,202,240
3. *Unoccupied* (a)	198,312,272	195,484,934	188,225,182	184,518,691	162,436,725

Total area of Northern Territory—335,116,800 acres.

(a) Including Aboriginal and other Reserves, and Mission Stations.

At the end of the year 1927 only 0.14 per cent. was alienated absolutely; 51.37 per cent. was held under leases and licences; while the remaining 48.49 per cent. was unoccupied.

9. **Federal Capital Territory.**—The following table shows particulars for the years 1923 to 1927 for the Federal Capital Territory, the total area of which (inclusive of Jervis Bay area, 7,920 acres) is 601,580 acres:—

ALIENATION AND OCCUPATION OF CROWN LANDS.—FEDERAL CAPITAL TERRITORY, 1923 TO 1927.

Particulars.	1923.	1924.	1925.	1926.	1927.
	Acres.	Acres.	Acres.	Acres.	Acres.
Area of acquired lands ..	206,000	206,296	209,531	210,567	212,159
Alienated	43,982	43,175	46,404	45,689	44,584
In process of alienation ..	74,070	65,594	54,832	54,510	52,975
Leased	119,899	106,619	103,511	98,593	93,866
Unoccupied	363,629	386,192	396,833	402,788	410,155

Total area of Federal Capital Territory (exclusive of Jervis Bay area)—583,660 acres.

Alienated land comprised in 1927, 7.4 per cent. of the total area, land in process of alienation 8.8 per cent., and lands held under lease 15.61 per cent. of the total area.

§ 12. Classification of Alienated Holdings According to Size.

Information in regard to the number of holdings in acreage groups is not collected annually, and is not available for Queensland and the Northern Territory. With the exception of Western Australia, where the figures were brought up to the year 1923–24, the published returns relate generally to the five years ended 1921–22. Tables containing the information to hand were given in Official Year Book No. 18, pp. 204–6, but consideration of space precludes their repetition in the present issue.

§ 13. The Progress of Land Settlement.

1. **Recent Progress.**—The progress of settlement and the growth of land alienation under recent legislation may be gathered from the subjoined statement, which shows the condition of the public estate in each State at the end of each year from 1922 to 1926 inclusive. As leases of large areas fall in or are otherwise terminated they are in many cases not renewed, but the land is then divided for the purpose of settlement under systems of deferred payment; the State Governments, also, have in many cases acquired by repurchase considerable areas under the provisions of the various Closer Settlement Acts. Further, greater facilities have been granted to workers to acquire land, and special inducements have been offered to *bona fide* settlers by the introduction of new forms of tenure on easy terms and conditions.

From 1901 to 1926 the area alienated absolutely in the whole of Australia increased by 38,805,393 acres, or 50.96 per cent.; the area in process of alienation increased by 26,320,278 acres, or 75.07 per cent.; the area leased by 209,126,368 acres, or 28.99 per cent.; while the area unoccupied decreased by 274,251,649 acres, or 25.61 per cent.

AREAS ALIENATED, IN PROCESS OF ALIENATION, HELD UNDER LEASE OR LICENCE, AND UNOCCUPIED, 1922 TO 1926.

Year.	Alienated.		In Process of Alienation.		Held under Lease or Licence.		Occupied by the Crown or Unoccupied.	
	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.
NEW SOUTH WALES(*a*).—Area, 198,036,500 Acres.								
1922	(*b*)40,328,908	20.36	20,823,001	10.51	115,731,565	58.44	21,153,026	10.69
1923	(*b*)40,920,579	20.66	20,628,726	10.42	115,698,693	58.42	20,788,502	10.50
1924	(*b*)41,283,173	20.86	21,116,729	10.72	115,216,540	58.17	20,420,058	10.25
1925	(*b*)41,860,222	21.14	21,235,785	10.72	115,046,836	58.09	19,893,657	10.05
1926	(*b*)42,323,683	21.37	22,392,634	11.31	114,240,573	57.69	19,079,610	9.63
VICTORIA.—Area, 56,245,760 Acres.								
1922	24,947,732	44.35	8,910,844	15.84	9,290,459	16.52	13,096,725	23.29
1923	25,090,672	44.61	8,875,981	15.78	9,273,378	16.49	13,005,729	23.12
1924	25,278,681	44.94	9,001,890	16.00	8,307,751	14.77	13,657,438	24.29
1925	25,463,719	45.27	9,772,718	17.37	7,040,530	12.52	13,968,793	24.84
1926	25,589,484	45.50	9,454,848	16.81	6,309,935	11.22	14,891,493	26.47
QUEENSLAND.—Area, 429,120,000 Acres.								
1922	17,244,544	4.02	7,833,127	1.83	302,966,871	70.60	101,075,458	23.55
1923	17,342.949	4.04	7,358,971	1.71	307,658,290	71.70	96,759,790	22.55
1924	17,419,425	4.06	7,150,240	1.67	309,657,644	72.16	94,892,691	22.11
1925	17,596,875	4.10	6,966,230	1.62	304,332,827	70.92	100,224,068	23.36
1926	17,768,636	4.14	6,802,460	1.59	306,010,651	71.31	98,538,253	22.96
SOUTH AUSTRALIA.—Area, 243,244,800 Acres.								
1922	11,068,491	4.55	3,023,556	1.24	117,029,008	48.11	112,123,745	46.10
1923	11,118,771	4.57	3,123,674	1.28	124,638,810	51.24	104,363,545	42.91
1924	11,237,058	4.62	3,270,884	1.34	127,229,963	52.31	101,506,895	41.73
1925	11,349,444	4.67	3,397,866	1.40	121,561,284	49.97	106,936,206	43.96
1926	11,460,247	4.71	3,442,047	1.41	120,327,744	49.47	108,014,762	44.41

(*a*) To 30th June.

(*b*) Excludes lands alienated but subsequently resumed or reverted to the Crown.

AREAS ALIENATED, IN PROCESS OF ALIENATION, ETC.—*continued.*

WESTERN AUSTRALIA.(a)—AREA, 624,588,800 ACRES.

Year.	Alienated.		In Process of Alienation.		Held under Lease or Licence.		Occupied by the Crown or Unoccupied.	
	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.
1922	9,724,931	1.56	16,031,176	2.56	267,619,907	42.85	331,212,786	53.03
1923	10,051,080	1.61	17,013,586	2.72	262,147,176	41.97	335,376,958	53.70
1924	10,520,028	1.68	17,822,601	2.85	218,898,716	35.05	377,347,455	60.42
1925	10,978,850	1.74	17,922,942	2.87	232,991,947	37.29	362,695,061	58.10
1926	11,688,569	1.87	18,588,898	2.93	230,562,767	36.91	363,748,566	58.24

TASMANIA.—AREA, 16,778,000 ACRES.

Year.	Alienated.		In Process of Alienation.		Held under Lease or Licence.		Occupied by the Crown or Unoccupied.	
	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.
1922	5,326,825	31.75	880,410	5.25	2,457,620	14.65	8,113,145	48.35
1923	5,407,937	32.23	798,043	4.76	2,419,736	14.42	8,152,284	48.59
1924	5,490,734	32.72	729,861	4.35	2,399,102	14.30	8,158,303	48.63
1925	5,546,357	33.06	700,000	4.17	2,416,503	14.40	8,115,140	48.37
1926	5,594,934	33.35	645,000	3.84	2,862,192	17.06	7,675,874	45.75

NORTHERN TERRITORY.—AREA, 335,116,800 ACRES.

Year.	Alienated.		In Process of Alienation.		Held under Lease or Licence.		Occupied by the Crown or Unoccupied.	
	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.
1922	476,556	0.14	..	..	134,488,526	40.13	200,151,718	59.73
1923	476,556	0.14	..	..	136,327,972	40.68	198,312,272	59.18
1924	476,912	0.14	..	..	139,154,954	41.52	195,484,934	58.34
1925	476,912	0.14	..	..	146,414,706	43.69	188,225,182	56.17
1926	476,912	0.14	..	..	150,121,197	44.80	184,518,691	55.06

FEDERAL CAPITAL TERRITORY.—AREA, 601,580 ACRES.

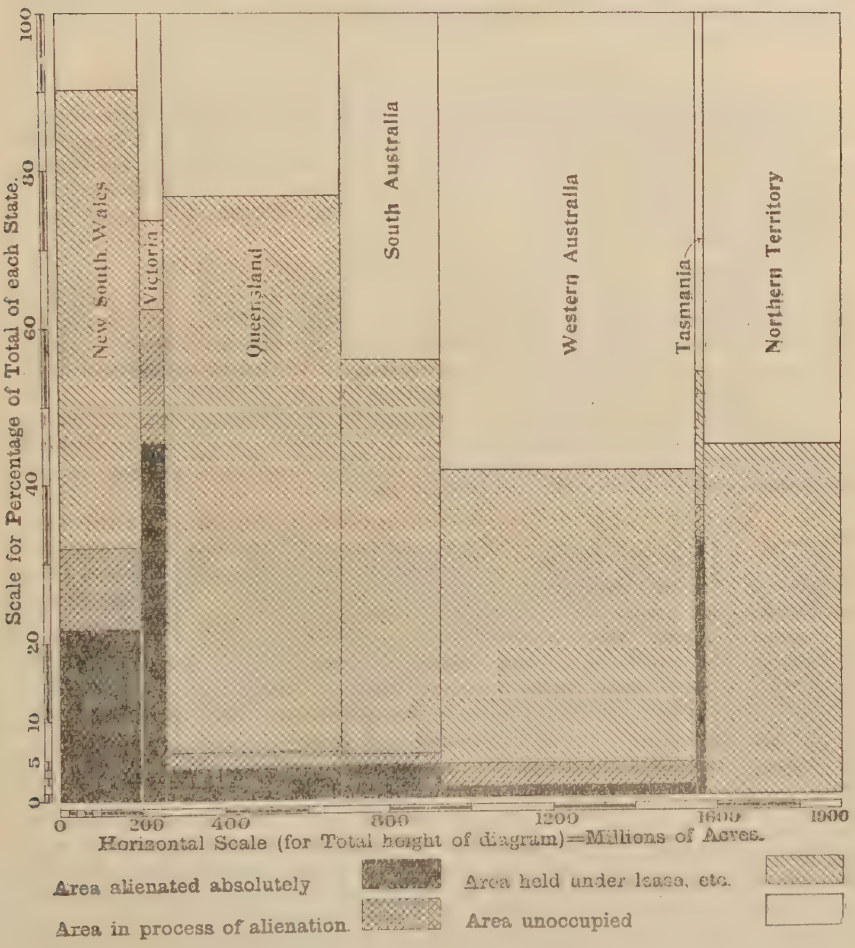
Year.	Alienated.		In Process of Alienation.		Held under Lease or Licence.		Occupied by the Crown or Unoccupied.	
	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.
1922	44,708	7.43	66,325	11.03	300,697	49.99	189,850	31.55
1923	43,982	7.31	74,070	12.31	119,899	19.93	363,629	60.45
1924	43,175	7.18	65,594	10.90	106,619	17.72	386,192	64.20
1925	46,404	7.71	54,832	9.11	103,511	17.21	396,833	65.97
1926	45,689	7.59	54,510	9.06	98,593	16.39	402,788	66.96

AUSTRALIA.—AREA, 1,903,732,240 ACRES.

Year.	Alienated.		In Process of Alienation.		Held under Lease or Licence.		Occupied by the Crown or Unoccupied.	
	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.	Area in Acres.	Per Cent.
1922	109,162,695	5.73	57,568,439	3.02	949,884,653	49.90	787,116,453	41.35
1923	110,452,526	5.80	57,873,051	3.04	958,283,954	50.34	777,122,709	40.82
1924	111,749,186	5.87	59,157,799	3.11	920,971,289	48.38	811,853,966	42.64
1925	113,229,446	5.95	60,050,373	3.15	929,847,466	48.84	800,604,955	42.06
1926	114,948,154	6.04	61,380,397	3.22	930,533,652	48.88	796,870,037	41.86

(a) To 30th June.

2. Diagram showing Condition of Public Estate.—The following diagram shows the condition of the public estate at the end of the year 1926. The square itself represents the total area of Australia, while the relative areas of individual States are shown by the vertical rectangles. The areas alienated absolutely, in process of alienation under systems of deferred payments, and the areas held under leases or licences, are designated by the differently-shaded areas as described in the reference given below the diagram, while the areas unoccupied are left unshaded:—



CHAPTER VI.

OVERSEA TRADE.

§ 1. Introductory.

1. **Constitutional Powers of the Commonwealth in regard to Commerce.**—The powers vested in the Commonwealth Parliament by the Commonwealth Constitution Act with respect to oversea trade and commerce will be found in sub-section 51 (i) and sub-sections 86 to 95 of the Act, which is printed in full in Chapter I. of this volume.

§ 2. Commonwealth Legislation affecting Oversea Trade.

1. **General.**—In previous issues of the Year Book brief particulars of the various Commonwealth Acts and amendments thereof affecting oversea trade have been given in chronological order. It is not proposed to repeat this information in the present issue, but the main provisions of the initial Commonwealth Customs Legislation and of the principal Acts in operation at the present time affecting external trade are mentioned hereunder.

2. **Development of Customs Legislation.**—(i) *Customs Act of 1901.* The first Commonwealth Act relating to Customs, entitled "Customs Act 1901 (No. 6 of 1901)," came into operation by proclamation on the 4th October, 1901. This Act provided for the establishment of the necessary administrative machinery for all matters pertaining to the Customs, and prescribed, *inter alia*, the manner in which Customs duties shall be computed and paid. It did not, however, determine the rates of duties.

During the interval between the establishment of the Commonwealth, viz., on 1st January, 1901, and the coming into operation of the Customs Act 1901, the Customs Acts of the several States were administered by the Executive Government of the Commonwealth under Section 86 of the Constitution.

(ii) *Customs Act 1901–1925.* Several amendments of the original Act of 1901 have been made, and have been incorporated in the Customs Act 1901–1925, which comprises the Customs Act 1901 (No. 6 of 1901), as amended by Acts No. 36 of 1910, No. 19 of 1914, No. 10 of 1916, No. 19 of 1922, No. 12 of 1923, and No. 22 of 1925. The Customs Act 1901 has also been amended by the Spirits Act 1906 (No. 21 of 1906), section 5, and by the Customs (Interstate Accounts Act) 1910 (No. 9 of 1910), section 2. Act No. 12 of 1923 provides that aeroplanes, seaplanes, airships, etc., from parts beyond the seas shall be subject to Customs control similar to that provided for vessels from oversea. Act No. 22 of 1925 provides new conditions relating to the application of the Preferential Tariff.

(iii) *The First Tariff.* The first Commonwealth Customs Tariff was introduced in the House of Representatives on the 8th October, 1901, and the "Customs Tariff Act 1902 (No. 14 of 1902)" was assented to on the 16th September, 1902. This Act made provision that uniform duties of Customs specified in the Tariff Schedule should be imposed from the 8th October, 1901. From this date, trade between the States became free, with the exception that under Section 95 of the Constitution Act the right was reserved to the State of Western Australia to levy duty on the goods from other States for five years. Prior to the establishment of the Commonwealth, a different tariff was in operation in each State, and interstate trade was subject to the same duties as oversea trade.

3. **Customs Tariff 1921 (No. 25 of 1921).**—The date of commencement of the imposition of the duties of Customs imposed by this Act was the 25th March, 1920. The Tariff schedule provided a British Preferential Tariff, an Intermediate Tariff, and a General Tariff.

The Act of 1921 repealed the following Acts :—Customs Tariff 1908 (No. 7 of 1908) ; Customs Tariff Amendment 1908 (No. 13 of 1908) ; Customs Tariff 1910 (No. 39 of 1910) ; Customs Tariff 1911 (No. 19 of 1911) ; and with the exception of the proposals contained in such Acts relating to the Tariff on goods imported from, and the produce or manufacture of, the Union of South Africa, the Customs Tariff Validation Act 1917, and the Customs Tariff Validation Act 1919.

4. **Customs Tariff 1921–1926.**—The Tariff Schedule now in operation incorporates Customs Tariff 1921 (Act No. 25 of 1921), Customs Tariff 1922 (Act No. 16 of 1922), Customs Tariff (Sugar) 1922 (Act No. 32 of 1922), Customs Tariff 1923 (Act No. 22 of 1923), Customs Tariff 1924 (Act No. 1 of 1924), Customs Tariff 1926 (Act No. 26 of 1926), and Customs Tariff (No. 2) 1926 (Act No. 45 of 1926).

The Tariff Schedule provides a British Preferential Tariff, an Intermediate Tariff, and a General Tariff. The main provisions of the Act are mentioned hereunder.

The rates of duty set out in the Schedule in the column headed "British Preferential Tariff" apply to goods the produce or manufacture of the United Kingdom, subject to the condition that the goods have been shipped in the United Kingdom to Australia, and have not been transhipped, or, if transhipped, then only if it is proved satisfactorily that the intended destination of the goods, when originally shipped from the United Kingdom, was Australia (Section 8 of Act No. 25 of 1921.)

The provisions of the British Preferential Tariff may be applied wholly or in part to any portion of the British Dominions, and the provisions of the Intermediate Tariff may be applied wholly or in part to any portion of the British Dominions or to any foreign country by negotiation.

The rates of duty set out in the column headed "General Tariff" apply to all goods to which the rates set out in either of the columns headed "British Preferential Tariff" or "Intermediate Tariff" do not apply (Act No. 25 of 1921, Section 10). The General Tariff applies to all importations, excepting importations the produce or manufacture of the United Kingdom, shipped in the United Kingdom to Australia, and excepting also goods covered by the Customs Tariff (New Zealand Preference) Acts No. 3 of 1922, No. 36 of 1922, and No. 38 of 1926; the Proclamation relating to Canadian Preference, and the Customs Tariff (Papua and New Guinea Preference) Act No. 6 of 1926.

On the 24th November, 1927, an amending Tariff Schedule was introduced into the House of Representatives. This Schedule embodied a reduction or abolition of some revenue-producing items; a further measure of protection to some Australian industries; and an expansion and extension of preference to British trade. The principal items affected were textiles and metals and machinery. These amendments were ratified by legislation in 1928.

5. **South African Preference.**—By the Customs Tariff (South African Preference) Act 1906 it was provided that certain goods, specified in the Schedule to that Act, imported from, and the produce or manufacture of, any of the British South African Colonies or Protectorates included in the South African Customs Union, should be admitted to the Commonwealth at preferential rates as compared with the general rates then in force under the Schedule to the Customs Tariff 1902. Section 5 of Customs Tariff (Act No. 26 of 1926) repealed the Customs Tariff (South African Preference) 1906, also Section 15 of the Customs Tariff 1921–24, which provided for a continuance of the South African Preference as set out in the Act of 1906. The repeal came into operation on the first day of July, 1926, and thereafter the provisions of the Customs Tariff 1921–26 apply in relation to goods imported from South Africa which are entered for home consumption on and after that date.

6. **British Preference.**—The Customs Tariff 1908 (No. 7 of 1908) made provision for preferential rates of Customs duties on certain goods the produce or manufacture of the United Kingdom. This Act was repealed by the Customs Tariff 1921 (No. 25 of 1921), which is now incorporated with Customs Tariff 1921–1928. The main provisions in these Acts relating to preference have already been mentioned.

7. **New Zealand Preference.**—(i) *General.*—The Customs Tariff (New Zealand Preference) 1922 (No. 3 of 1922) was assented to on the 23rd August, 1922, and repealed Act No. 27 of 1921. The Act was proclaimed on the 1st September, 1922, and the duties of Customs provided for in the Schedule of the Act came into force on and from that date. The Act provided that the duties of Customs on goods imported direct from, and the produce or manufacture of, the Dominion of New Zealand shall be in accordance with the following rates:—

(*a*) On all goods described in the Tariff Schedule against which rates of duty are set out in the column headed "Proposed Duties against New Zealand" the rates so set out.

(b) On all goods other than those provided for in paragraph (a) the rates of duty for the time being applicable to goods to which the British Preferential Tariff applies.

The Act ratifies and confirms the agreement made on the 11th April, 1922, between the Commonwealth of Australia and the Dominion of New Zealand, and provides that, from and after the 1st May, 1922, duties of Customs on goods not being the produce or manufacture of New Zealand which are imported into the Commonwealth from that Dominion and upon which, if they had been imported into the Commonwealth direct from the country of origin, there would have been payable duties of Customs at the rates set out in the British Preferential Tariff shall be in accordance with the rates set forth in that particular tariff.

The Customs Tariff (New Zealand Preference, No. 2).—Act No. 36 of 1922, assented to on 18th October, 1922, relates to the rates of duty on certain imports from New Zealand specified in the Schedule to the Act. The goods specified are—Meats, preserved in tins or other airtight vessels; sheets and roofing slates composed of cement and asbestos or of similar materials; dairying machines and implements, viz.,—curd agitators and curd mixers; and corn (millet) brooms.

New Zealand Re-exports Act 1924 (No. 21 of 1924) assented to on 16th September, 1924, relates to the value for duty of goods not the produce or manufacture of New Zealand, which are imported into Australia from New Zealand.

(ii) *Customs Tariff (New Zealand Preference)* (*No 38 of 1926*) ratifies an agreement made on the 30th of April, 1926, between the Commonwealth of Australia and the Dominion of New Zealand relating to preferential duties of Customs. This agreement is supplemental to an agreement under seal made on 11th April, 1922. Clause 2 of the principal agreement is varied further, as set out hereunder:—

"The Commonwealth shall not impose any Customs duty or increase the rate of any Customs duty on any article the produce or manufacture of the Dominion entering the Commonwealth from the Dominion, and the Dominion shall not impose any Customs duty or increase the rate of any Customs duty on any article the produce or manufacture of the Commonwealth entering the Dominion from the Commonwealth (whether such article is or is not specifically enumerated in the Schedule hereto, and whether such article is or is not dutiable at the date of this agreement) except by mutual agreement, until after six calendar months' notice to the other party to this agreement."

8. **Papua and New Guinea Preference.**—The Customs Tariff (Papua and New Guinea Preference) 1926 (No. 6 of 1926) was assented to on 15th February, 1926, and relates to Customs Preference on goods the produce of Papua and the Territory of New Guinea. The importation into Australia, direct from Papua or New Guinea, of such of the goods specified in the Schedule to the Act as were produced in the Territory shall, notwithstanding anything contained in the Customs Tariff 1921–1924, be free of duty. The items specified in the Schedule are:—Coffee; fruits, dried, viz., litchi; fruits, fresh, various native fruits; fungi; ginger; rangoon beans; coconuts; and seeds, viz., kapok and sesame.

9 **Tariff Board Act 1921 (No. 21 of 1921).**—This Act, which was assented to on the 15th December, 1921, as amended by Tariff Board Act 1923 (No. 25 of 1923), provides for the appointment of a Tariff Board consisting of four members, one of whom shall be an administrative officer of the Department of Trade and Customs. This member shall be appointed Chairman of the Board. The purpose of the Tariff Board is to assist the Minister in the administration of matters relating to trade and customs. The more important matters which the Minister shall refer to the Board for enquiry and report include the classification of goods for duty; the determination of the value of goods for duty; any disputes arising out of the interpretation of any Customs or Excise Tariff; the necessity for new, increased or reduced duties; the necessity for granting bonuses; any proposal for the application of the British Preferential Tariff or the Intermediate Tariff to any part of the British Dominions or any foreign country; and any complaint that a manufacturer is taking undue advantage

of the protection afforded him by the tariff by charging unnecessarily high prices for his goods or acting in restraint of trade. The Minister may refer to the Board for enquiry and report the following matters :—the general effect of the working of the Customs Tariff and the Excise Tariff; the fiscal and industrial effects of the Customs laws of the Commonwealth, the incidence between the rates of duty on raw materials and on finished or partly finished products; and any other matter affecting the encouragement of primary and secondary industries in relation to the tariff.

10. Tariff Board Act 1924 (No. 29 of 1924).—This Act, which was assented to on 26th September, 1924, amended the Tariff Board Act 1921–23. Section 5 of the Principal Act provided for a Tariff Board consisting of three members. The section was amended by Tariff Board Act (No. 25 of 1923) by omitting the word "three" and inserting in its stead the word "four."

Section 6, sub-section (3), of the principal Act was amended during 1924 (Act No. 29 of 1924) by providing that members of the Board shall be appointed for a term not being less than one year nor more than three years. This amending Act provides that in inquiries conducted by the Board relating to any revision of the Tariff, any proposal for a bounty, or any complaints that a manufacturer is taking undue advantage of the protection afforded him by the Tariff, shall be held in public and evidence in such inquiries shall be taken in public on oath, unless any witness objects to giving any evidence in public which the Board is satisfied is of a confidential nature, when the Board may take such evidence in private. Evidence taken by the Board in connexion with any inquiry under the Customs Tariff (Industries Preservation) Act 1921–22 shall be taken in public on oath. Section 37 of the Principal Act relating to duration of Act is repealed.

The Annual Report of the Tariff Board, issued in accordance with Section 18 (1) of the Tariff Board Act 1921–24, reviews the work of the Board to June, 1927. The Report covers :—(*a*) Operation of the Tariff in regard to—(1) Primary Industries; (2) Secondary Industries; (3) Tariff Revision; (4) Admission of Goods under By-laws; (5) Deferred Duties; (6) Bounties; (7) Customs Tariff (Industries Preservation) Act; and (8) General. The last division includes statements of the Board's conclusions as to the condition of industry, the abuse of protection by industrial unions, and by primary and secondary producers.

11. Customs Tariff (Industries Preservation) Act 1921 (No. 28 of 1921).—This Act, assented to on the 16th December, 1921, provides that after inquiry and report by the Tariff Board, special duties shall be collected in the following cases when the importation of the goods referred to might be detrimental to an Australian industry :—In the case of goods sold for export to Australia at a price less than the fair market price for home consumption or at a price which is less than a reasonable price, a special dumping duty shall be collected equal to the difference between the price at which the goods were sold and a fair market price. Similar provision is made for goods consigned to Australia for sale. With regard to goods exported to Australia at rates of freight less than the rates prevailing at the time of shipment, there shall be collected a dumping freight duty equal to 5 per cent. of the fair market value of the goods at the time of shipment. Special duties are also imposed in the case of goods imported from countries whose currency is depreciated. Provision is also made for the protection of the trade of the United Kingdom in the Australian market from depreciated foreign currency.

Several amendments of the Act have been recommended by the Tariff Board and have been put into effect.

The Act provides that the Minister for Trade and Customs, after inquiry and report by the Tariff Board, may publish a notice in the *Commonwealth Gazette* specifying the goods upon which special rates of duty under this Act shall be charged and collected.

Since the Act came into operation over 300 notices have been gazetted, including those which revoked previous gazettals, the majority of the notices being made under Sections 8 and 9 of the Act and relating to commodities from countries with depreciated currency to the detriment of Australian or British industries. Over 50 per cent. of the gazettals relate to goods imported from Germany. Three gazettals affect certain goods imported from all countries, while 2 affect goods from all countries excepting United Kingdom. Separate notices have been issued relating to goods from 17 different countries. The commodities brought under the various sections of the Act exceed 150, and cover a very wide range of goods.

12. Commerce (Trade Descriptions) Act 1905 (No. 16 of 1905).—This Act was assented to on the 8th December, 1905, and brought into operation by proclamation on the 8th June, 1906. It gives power to compel the placing of a proper description on certain prescribed goods, or on packages containing the same, being imports or exports of the Commonwealth. The imports to which a trade description must be applied are :—(*a*) Articles used for food or drink by man, or used in the manufacture or preparation of articles used for food or drink by man ; (*b*) medicines or medicinal preparations for internal or external use ; (*c*) manures ; (*d*) apparel (including boots and shoes), and the materials from which apparel is manufactured ; (*e*) jewellery ; (*f*) agricultural seeds and plants ; and (*g*) brushware.

13. Acts Passed in 1927.—The following Acts relating to Australian production and trade were assented to during the year 1927 :—

Dried Fruit Export Charges Act (*No.* 6 *of* 1927). An Act to amend the Dried Fruit Export Charges Act 1924.

Pearl-shell Overseas Marketing Act (*No.* 13 *of* 1927). An Act relating to the export of Pearl-shell and for other purposes.

Pearl-shell Export Charges Act (*No.* 14 *of* 1927). An Act to impose charges upon the export of pearl-shell.

Fresh Fruits Overseas Marketing Act (*No.* 22 *of* 1927). An Act relating to the export of fresh fruits and for other purposes.

Fresh Fruits Export Charges Act (*No.* 23 *of* 1927). An Act to impose charges upon the export of fresh fruits.

Iron and Steel Products Bounty Act (*No.* 38 *of* 1927). An Act to amend the Iron and Steel Products Bounty Act 1922.

§ 3. Method of Recording Imports and Exports.

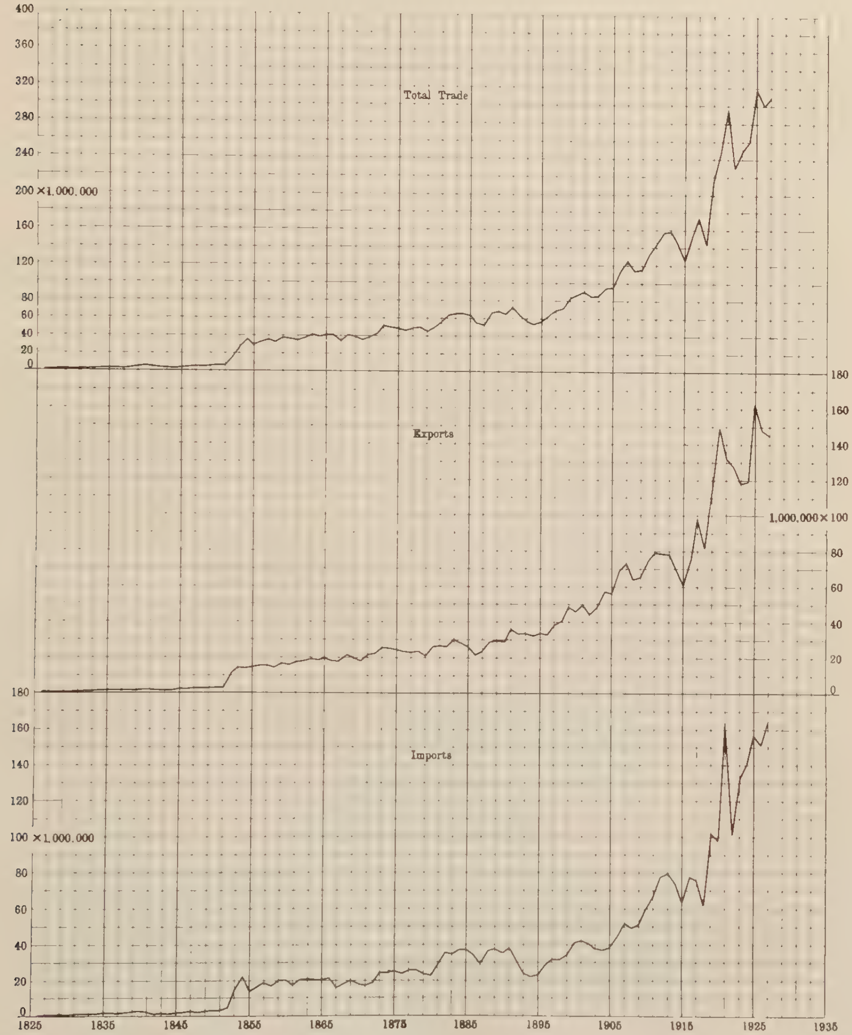
1. Value of Imports.—The recorded value of goods imported from countries beyond Australia as shown in the following tables represents the amount on which duty is payable or would be payable if the duty were charged *ad valorem*. The value of goods is taken to be 10 per cent. in advance of their fair market value in the principal markets of the country whence the goods were exported. Acting upon a recommendation of the Tariff Board the section of the Customs Act relating to the valuation of imports was recently amended, and Section 154 (1) of the Customs Act 1901–1925 now provides that " when any duty is imposed according to value, the value for duty shall be the sum of the following :—

(*a*) (i) the actual money price paid or to be paid for the goods by the Australian importer plus any special deduction, or
(ii) the current domestic value of the goods, whichever is the higher ;
(*b*) all charges payable or ordinarily payable for placing the goods free on board at the port of export ; and
(*c*) ten per centum of the amounts specified under paragraphs (*a*) and (*b*) of this sub-section.

> " Current domestic value " is defined as " the amount for which the seller of the goods to the purchaser in Australia is selling or would be prepared to sell for cash, at the date of exportation of those goods, the same quantity of identically similar goods to any and every purchaser in the country of export for consumption in that country."

Section 157 of the Customs Act provides that when the invoice value of imported goods is shown in any currency other than British currency, the equivalent value in British currency shall be ascertained according to a fair rate of exchange. Under this section it was the practice of the Department of Trade and Customs, until the 8th December, 1920, to convert on the basis of the mint par of exchange. Since the date mentioned, in consequence of a ruling of the High Court, all conversions have been based on the commercial rates of exchange.

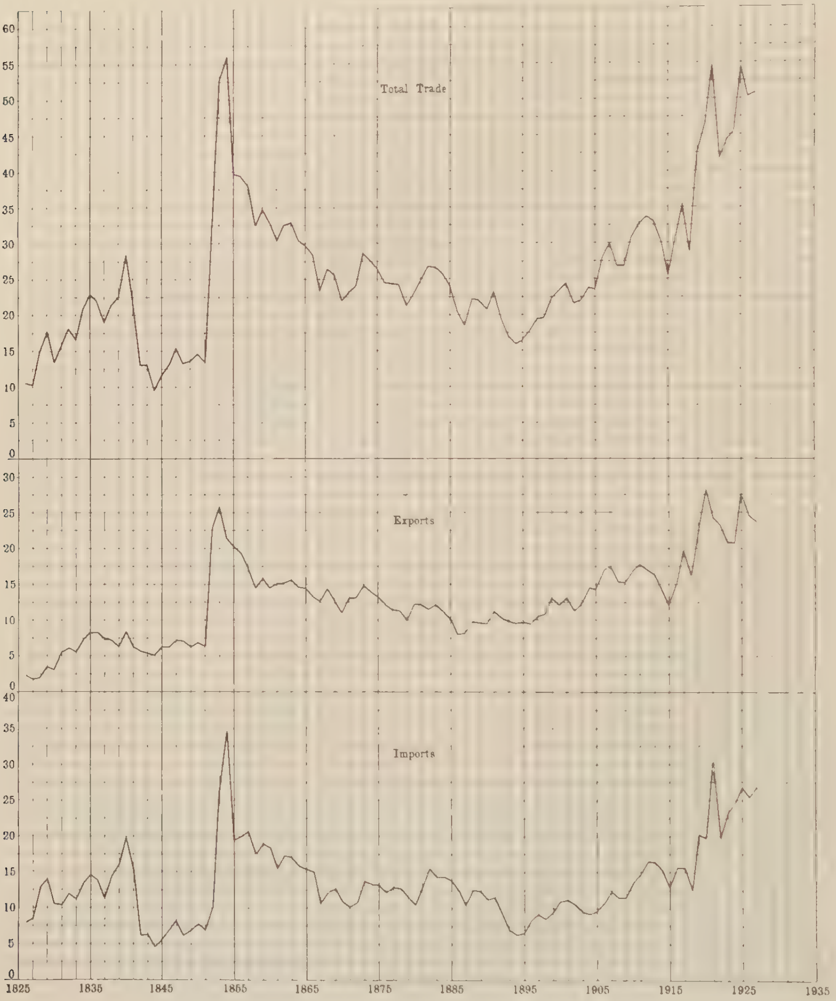
VALUES OF TOTAL TRADE, EXPORTS, AND IMPORTS, AUSTRALIA, 1826 TO 1926-27.



(See page 202.)

Explanation.—The base of each square represents an interval of two years, and the vertical height ten million pounds sterling for imports and exports, and twenty million pounds sterling for total trade.

VALUES PER HEAD OF POPULATION OF TOTAL TRADE EXPORTS, AND IMPORTS —AUSTRALIA, 1826 TO 1926-27.



(See page 202.)

EXPLANATION. —The base of each square represents an interval of two years, and the vertical height £2 10s. 0d. per head of the population.

2. **Value of Exports.**—The recorded value of goods exported is taken to represent the value in the principal markets of the Commonwealth in the ordinary commercial acceptation of the term.

3. **Customs Area.**—The Customs Area, to which all Oversea Trade statistics issued by this Bureau apply, is the whole area of the Commonwealth of Australia, comprising the States of New South Wales, Victoria, Queensland, South Australia, Western Australia, Tasmania and the Northern Territory (contiguous territory). Other (non-contiguous) territories and mandated areas are treated as outside countries. Trade transactions between the Commonwealth and these non-contiguous territories are included in the oversea trade of the Commonwealth. Such transactions, however, are also registered separately, i.e., the trade of the Commonwealth with each particular country is separately recorded and tabulated.

4. **Statistical Classification of Imports and Exports.**—The Oversea Trade Bulletin No. 24 for the year 1926–27, from which the summary figures in this Year Book are extracted, was compiled according to a revised classification which came into operation on 1st July, 1922. In order to meet the demand for more detailed information relating to Imports and Exports the existing statistical classification was revised and considerably extended during the early part of 1922. The new classification is divided into 21 classes, with 1,496 separate Import items and 511 Export items.

5. **The Trade Year.**—From the 1st July, 1914, the statistics relating to Oversea Trade are shown according to the fiscal year (July to June). Prior to that date the figures showed the volume of trade during each calendar year.

6. **Records of Past Years.**—In the years preceding federation, each State independently recorded its trade, and in so doing did not distinguish other Australian States from foreign countries. As the aggregation of the records of the several States is necessarily the only available means of ascertaining the trade of Australia for comparison with later years, it is unfortunate that past records of values and the direction of imports and exports were not on uniform lines. The figures in the following table for years prior to federation have been carefully compiled and may be taken as representative of the oversea trade of Australia as a whole. On the introduction of the Customs Act 1901, the methods of recording values were made uniform throughout the States, but it was not until September, 1903, that a fundamental defect in the system of recording transhipped goods was remedied. Prior to 1905 the value of ships imported or exported was not included in the returns of trade.

7. **Ships' Stores.**—Prior to 1906 goods shipped in Australian ports on board oversea vessels as ships' stores were included in the general exports. From 1906, ships' stores have been specially recorded as such, and omitted from the return of exports. A table showing the value of these stores shipped each year since 1906 is given later on in this Chapter.

§ 4. Oversea Trade.

1. **Total Oversea Trade.**—(i) *General.* The following table shows the total trade of the Commonwealth with oversea countries from the earliest date for which records are available. To economize space, the period 1826 to 1915–16 has been divided into quinquennia, and the figures shown represent the annual averages for the quinquennia specified. The figures for individual years have been published in previous issues of the Year Book. (See "Official Year Book," No. 13, pp. 577–578).

OVERSEA TRADE.—AUSTRALIA, 1826 TO 1926–27.

Period.(a)	Recorded Value.			Value per Inhabitant.									Percentage of Exports on Imports.
	Imports.	Exports.	Total.	Imports.			Exports.			Total.			
	£1,000.	£1,000.	£1,000.	£	s.	d.	£	s.	d.	£	s.	d.	%
1826–30 ..	638	153	791	10	12	5	2	10	11	13	3	4	23.9
1831–35 ..	1,144	613	1,757	11	19	10	6	8	6	18	8	4	53.6
1836–40 ..	2,283	1,112	3,395	14	15	9	7	4	1	21	19	10	48.7
1841–45 ..	1,906	1,378	3,284	9	0	5	6	10	5	15	10	10	72.3
1846–50 ..	2,379	2,264	4,643	6	18	10	6	12	2	13	11	0	95.2
1851–55 ..	11,931	11,414	23,345	19	12	5	18	15	4	38	7	9	95.7
1856–60 ..	18,816	16,019	34,835	18	6	1	15	11	8	33	17	9	85.1
1861–65 ..	20,132	18,699	38,831	15	17	1	14	14	9	30	11	10	93.0
1866–70 ..	18,691	19,417	38,108	12	7	4	12	16	11	25	4	3	103.9
1871–75 ..	21,982	24,247	46,229	12	7	2	13	13	6	26	0	8	110.3
1876–80 ..	24,622	23,772	48,394	11	19	7	11	10	9	23	10	4	96.6
1881–85 ..	34,895	28,055	62,950	14	4	3	11	9	5	25	13	8	80.4
1886–90 ..	34,675	26,579	61,254	11	16	11	9	1	0	20	17	11	76.6
1891–95 ..	27,335	33,683	61,018	8	5	2	10	2	5	18	7	7	123.2
1896–1900	33,763	41,094	74,857	9	5	4	11	5	6	20	10	10	121.7
1901–5 ..	39,258	51,237	90,495	10	1	10	13	2	9	23	4	7	130.5
1906–10 ..	51,508	69,336(b)	120,844	12	4	8	16	9	11	28	14	7	134.6
1911–15–16	73,411	74,504	147,915	15	7	4	15	12	10	31	0	2	101·5
1916–17 ..	76,229	97,955	174,184	15	10	0	19	18	3	35	8	3	128.5
1917–18 ..	62,335	81,429	143,764	12	10	3	16	6	9	28	17	0	130.6
1918–19 ..	102,335	113,964	216,299	20	2	9	22	8	7	42	11	4	111.4
1919–20 ..	98,974	149,824	248,798	18	13	2	28	4	11	46	18	1	151.4
1920–21 ..	163,802	132,159	295,961	30	5	7	24	8	5	54	14	0	80.7
1921–22 ..	103,066	127,847	230,913	18	14	1	23	4	1	41	18	2	124.0
1922–23 ..	131,758	117,870	249,628	23	7	8	20	18	4	44	6	0	89.5
1923–24 ..	140,618	119,487	260,105	24	9	1	20	15	8	45	4	9	85.0
1924–25 ..	157,143	162,030	319,173	26	15	1	27	11	9	54	6	10	103.1
1925–26 ..	151,638	148,562	300,200	25	6	2	24	15	10	50	2	0	98.0
1926–27 ..	164,717	144,895	309,612	26	19	1	23	14	3	50	13	4	88.0

(a) The figures given for the years 1826 to 1915–16 represent the annual averages for the quinquennial periods. The trade of the individual years will be found in the Official Year Book No. 12 and earlier issues. (b) Prior to 1906 ships' stores were included in the general exports. For value of these goods shipped each year since 1906 see later table.

The graphs of the movement of the oversea trade of Australia which accompany this Chapter show that periods of depressed trade have been recurrent at more or less regular intervals of from seven to nine years, and, measured by population, each succeeding depression since 1855 carried the trade per head lower than the preceding one, until the lowest point was reached in 1894. The heavy decline in the last-mentioned year was due to the acute financial stress which culminated in the financial crisis of 1893. There was a slight recovery in 1895, and a continuous upward movement until 1901. A decline, due to drought, in the exports of primary products, reduced the figures for 1902, but from this date until 1907 there was an increase. There was a falling-off in 1908 as compared with 1907, but from 1909 the value of imports and exports showed a steady increase until 1913, the year prior to the war. The trade of 1914–15 and subsequent years was seriously disturbed by the dislocation of shipping and increased prices arising out of war conditions. The shortage of shipping was particularly marked in 1917–18, when, in order to conserve space for more essential requirements, the importation of goods which were considered to be in the nature of luxuries was prohibited or restricted. Shipping facilities having improved during 1918–19 the oversea trade of Australia increased rapidly. Imports and exports during that year show heavy increases compared with previous years. The value of imports declined during 1919–20, but exports increased enormously, the total reaching the high figure of £149,823,509.

(ii) *Trade Conditions, 1920–21.* During the year 1920–21 the value of imports increased considerably. This increase was largely due to the fulfilment of long standing orders which it had been impossible to execute earlier. In their anxiety to replenish stocks which had become depleted during the war, and to take advantage of the free spending of soldiers' gratuities and repatriation moneys, Australian importers ordered freely in the belief that their orders could not be satisfied immediately, but hoping to get a percentage thereof. The trade depression in Great Britain, and the cancellation of foreign orders, however, enabled British manufacturers to devote their attention to Australian orders, with the result that shipments, which it had been expected would be spread over a long period were received in quick succession. The rapidity with which the goods arrived created some difficulty in providing exchange, and the banks found it necessary to restrict credit for import business. The value of imports during 1920–21 reached the exceptionally high figure of £163,801,826, an amount greatly in excess of any previous year.

(iii) *Trade in 1924–25.* The oversea trade during 1924–25 amounted to £319,173,455, of which £157,143,296 represented imports and £162,030,159 exports. These figures are in excess of those for the previous year, and so far as total trade and exports are concerned are the highest recorded, while in one year only (1920–21) has the figure for imports been exceeded.

(iv) *Trade in 1925–26.* Imports during 1925–26 were valued at £151,638,178 and exports at £148,562,209, the total oversea trade amounting to £300,200,387, showing a decrease of £19 millions compared with the previous year. Exports declined over thirteen millions, due to the reduced quantities of wheat and butter exported. The value of wheat sent abroad during 1924–25 was £34,613,713, as against £17,187,388 during the following year. Butter exports declined from £10,006,081 to £7,006,830. The value of wool shipped overseas during each year was slightly over sixty-three millions. Export of sugar increased from £2,163,480 to £5,313,403. Imports of merchandise were greater in 1925–26 than during the previous year, the values being £151,217,425 and £146,600,489 respectively. The specie and bullion imported during the two years were: 1925–26, £420,753, and 1924–25, £10,542,807.

(v) *Trade in 1926–27.* During 1926–27 imports were valued at £164,716,594 and exports at £144,895,183, amounting to a total trade of £309,611,777, or an increase of £9,411,390 over the previous year. The value of imports was greater than in any previous year, and exceeded that of 1925–26 by £13,078,416. Exports decreased in value by £3,667,026, due mainly to smaller exports of sugar, wool, butter, beef, and zinc. The value of sugar exported declined from £5,313,403, in 1925–26, to £1,730,694, in 1926–27; wool from £63,209,876 to £60,054,360; and butter from £7,006,830 to £5,465,347. Merchandise included in the above totals amounted in the case of imports to £164,127,759 and exports £132,591,877. The movement of specie and bullion was—imports £588,835 and exports £12,303,306, the bulk of the exports being sent to United States of America.

2. **Ratio between Exports and Imports.**—The foregoing table shows the percentage of exports on imports for each quinquennial period from 1826–30 to 1911–15 and for each financial year since 1915–16. Prior to the quinquennial period 1891–95 the balance of trade, with two exceptions, due to temporary dislocations, had been on the side of imports, while from that period to 1919–20 the position was reversed. From the 1st July, 1920, to the end of June, 1927, there has been an excess of imports, though the results for each of those years have not been consistently in that direction.

The excess of imports in the earlier years represents the introduction of capital into Australia in the form of Government loans or for investment in private undertakings, and the excess of exports which appears for many subsequent years represents mainly the interest and profit on the earlier investments, repayments of loans to oversea bondholders, and freight on trade carried chiefly on vessels of the United Kingdom and foreign countries. As the introduction of new capital, and the payments for interest on existing investments and for shipping and other services are continually operating in opposite directions at the same time in the statistics of trade, it follows that it is the balance only of these transactions which is reflected in the excess of imports or exports.

Trade balances are further modified by the loans floated abroad by local governing bodies, by the imports of foreign capital for private enterprises, and by the addition to or the absorption of bank balances held in London on Australian account. Definite information regarding these items is not readily available. Other factors which affect trade balances to a certain extent are the financial arrangements made by immigrants to Australia and also by tourists in Australia from abroad. The purchase in Australian ports of bunker coal and other stores for vessels owned outside Australia is also a matter of some importance.

Against these items, however, account must be taken of the capital of persons emigrating from Australia and the travelling and other expenses of tourists from Australia to other parts of the world. These expenses would include fares on all steamers not owned in Australia, and since the termination of the war would represent very large sums, the total of which could not be readily ascertained.

The following table presents the balance of trade of Australia as shown by the records of imports and exports for each year since 1st July, 1914, also the modifications of these figures by loans raised abroad by the Commonwealth and State Governments. In the exceptional circumstances arising from the war the excess of exports during this period is somewhat understated, as much of the wool exported appeared in the records at appraised rates, whereas sales effected later by the British Australian Wool Realization Association (B.A.W.R.A.) made considerable additions to the funds available in London on Australian account. Allowance has been made in the table for this increased value of wool exported. An approximation of Australia's annual liability for interest and services is also shown; any error in these figures will be in the direction of an understatement.

The fact that at the moment of writing (June, 1928) the Associated Banks of Australia are selling telegraphic transfers on London at a premium of twenty shillings per £100, whereas in 1921 similar accommodation was costing fifty shillings per £100 suggests that there are alleviating factors of considerable dimensions which might modify the results given in the table. Among these probable influences are:— Stocks of wheat still unshipped; and imports of private capital. It is estimated that at 30th April, 1928, wheat to the value of about £12 millions was awaiting export. Unfortunately, there is no information regarding the imports of private capital, but there is reason to believe that as a result of the protective tariff there has been a considerable importation of capital during recent years for which no immediate export is required.

BALANCE OF AUSTRALIAN TRADE FROM 1st JULY, 1914, TO MARCH, 1928.

Year.	Recorded excess of Exports.	Increase in Public Debt (Commonwealth and State) raised abroad.	B.A.W.R.A. Dividends.	Total of Columns (2), (3), and (4).	Approximate annual obligations abroad for interest and services.	Addition to Funds available abroad for transmission to Australia.	
						For the Year.	Accumulated from 1st July, 1914.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	£1,000,000	£1,000,000	£1,000,000	£1,000,000	£1,000,000	£1,000,000	£1,000,000
1914–15 ..	— 3.8	5.1	..	1.3	16.0	—14.7	—14.7
1915–16 ..	— 3.0	4.3	..	1.3	17.2	—15.9	—30.6
1916–17 ..	21.7	18.6	..	40.3	18.4	21.9	— 8.7
1917–18 ..	19.1	20.9	..	40.0	22.0	18.0	9.3
1918–19 ..	11.6	.5	..	12.1	22.2	—10.1	— .8
1919–20 ..	50.8	10.8	..	61.6	23.2	38.4	37.6
1920–21 ..	—31.6	11.3	7.7	—12.6	24.3	—36.9	.7
1921–22 ..	24.8	42.2	9.9	76.9	26.7	50.2	50.9
1922–23 ..	—13.9	3.9	5.9	— 4.1	26.8	—30.9	20.0
1923–24 ..	—21.1	48.1	5.3	32.3	28.5	3.8	23.8
1924–25 ..	4.9	.1	..	5.0	29.5	—24.5	— .7
1925–26 ..	— 3.1	37.5	..	34.4	32.0	2.4	1.7
1926–27 ..	—19.8	11.8	..	— 8.0	33.2	—41.2	—39.5
1927–28 .. (6 months)	— 9.2	28.3	3.9	23.0	17.0	6.0	—33.5
Total ..	27.4	243.4	32.7	303.5	337.0	—33.5	—

§ 5. Direction of Trade.

1. Imports according to Country of Origin.—The following table shows the value of the imports into Australia stated to be the produce or manufacture of the undermentioned countries during the past five years :—

AUSTRALIAN IMPORTS.—COUNTRIES OF ORIGIN, 1922–23 TO 1926–27.

Country of Origin.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
United Kingdom	68,394,423	63,607,743	*a*69,047,807	*a*65,840,655	*a*67,795,177
British Possessions—					
Canada	5,064,253	5,046,519	3,384,712	3,754,425	4,324,421
Ceylon	1,001,412	1,251,392	1,587,738	1,614,084	2,153,219
India	4,393,685	4,800,086	6,423,364	6,626,030	6,661,408
Malaya (British)	272,759	494,930	612,314	1,701,508	2,025,757
New Zealand	2,003,307	2,514,225	2,196,566	2,651,002	3,123,038
Pacific Islands—					
Fiji	116,290	61,866	26,241	35,841	41,701
Territory of New Guinea ..	418,420	99,588	261,032	345,603	627,403
Other Islands	777,085	988,449	1,133,488	1,080,992	1,278,347
Papua	209,193	471,953	295,199	348,210	242,939
South African Union	758,720	1,052,156	5,197,215	897,306	927,993
Other British Possessions ..	*a* 608,210	*a* 739,198	527,017	731,520	754,451
Total British Possessions ..	15,623,334	17,520,362	21,644,886	19,786,587	22,160,677
Total British Countries ..	84,017,757	81,128,105	90,692,693	85,627,242	89,955,854
Foreign Countries—					
Belgium	906,050	902,534	901,324	850,276	941,954
China	873,579	925,045	751,960	691,751	785,068
France	3,231,197	4,101,137	4,216,457	3,758,740	4,767,163
Germany	593,812	1,368,904	2,259,691	2,821,780	4,359,514
Italy	1,174,489	1,242,790	1,506,383	1,446,618	1,564,843
Japan	3,936,150	3,557,834	4,146,234	4,372,083	5,183,470
Netherlands	580,888	597,682	705,880	818,786	1,092,242
Netherlands East Indies ..	4,361,302	4,607,681	5,640,881	6,191,895	6,451,688
Norway	1,686,439	1,415,339	1,458,112	1,106,234	1,055,020
Pacific Islands	94,884	86,471	127,402	129,028	157,720
Philippine Islands	168,742	170,135	249,168	311,457	215,176
Sweden	1,629,515	2,031,872	1,638,004	1,871,123	1,847,290
Switzerland	2,189,854	2,274,296	2,327,565	1,997,768	2,458,810
United States of America ..	24,851,303	34,556,529	38,728,814	37,234,257	41,394,277
Other Foreign Countries ..	1,461,874	1,651,939	1,792,728	2,409,131	2,486,505
Total Foreign Countries ..	47,740,078	59,490,188	66,450.603	66,010,936	74,760,740
Total	131,757,835	140,618,293	157,143,296	151,638,178	164,716,594

(*a*) Exclusive of Irish Free State.

Imports increased abnormally during 1920–21, when the value reached the exceptionally large figure of 164 millions. The enhanced price of commodities and the peculiar conditions affecting Australian trade were responsible for the high value of imports during that year, and in making comparisons with imports during pre-war years these facts should be taken into consideration. The exceptional conditions affecting Australian trade during 1920–21 have already been mentioned in a previous paragraph.

The total value of the commodities imported during 1922–23 was 32 millions less than in 1920–21. The heavy importation of goods has continued to date. The value of imports during 1924–25 reached the high figure of £157,143,296, which has been exceeded in 1920–21 and 1926–27 only. During 1925–26 total imports declined to £151,638,178, but the figures for 1926–27, *viz.*, £164,716,594, exceeded those of any previous year. The value of both merchandise and of bullion and specie imported showed an increase compared with the previous year.

In view of the effect that the varying prices of commodities had upon the value of imports during the period dealt with it is somewhat difficult to ascertain from the preceding table the relative importance of the various countries in the import trade of Australia. A better idea of the proportion of imports supplied by each country during each year may be obtained from the following table of percentages.

2. Percentage of Imports from Various Countries.—The following table gives the relative proportions of the import trade of Australia which have been supplied by the British Possessions and foreign countries respectively.

AUSTRALIAN IMPORTS.—PERCENTAGES FROM COUNTRIES OF ORIGIN, 1922–23 TO 1926–27.

Country of Origin.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	per cent.	per cent.	per cent.	per cent.	per cent.
United Kingdom	51.90	45.24	*a* 43.93	*a* 43.42	*a* 41.16
British Possessions—					
Canada	3.84	3.59	2.15	2.48	2.62
Ceylon	0.76	0.89	1.01	1.07	1.31
India	3.33	3.41	4.09	4.37	4.04
Malaya (British)	0.21	0.35	0.39	1.12	1.23
New Zealand	1.52	1.79	1.40	1.75	1.90
Pacific Islands—					
Fiji	0.09	0.04	0.02	0.02	0.02
Territory of New Guinea ..	0.32	0.07	0.17	0.23	0.39
Other Islands	0.58	0.70	0.72	0.71	0.78
Papua	0.16	0.34	0.19	0.23	0.14
South African Union ..	0.58	0.75	3.31	0.59	0.56
Other British Possessions ..	*a* 0.46	*a* 0.53	0.33	0.48	0.46
Total British Possessions ..	11.85	12.46	13.78	13.05	13.45
Total British Countries ..	63.75	57.70	57.71	56.47	54.61
Foreign Countries—					
Belgium	0.69	0.64	0.57	0.56	0.57
China	0.67	0.66	0.48	0.46	0.48
France	2.45	2.92	2.68	2.48	2.89
Germany	0.45	0.97	1.44	1.86	2.65
Italy	0.89	0.88	0.96	0.95	0.95
Japan	2.99	2.53	2.64	2.88	3.15
Netherlands	0.44	0.42	0.45	0.54	0.66
Netherlands East Indies ..	3.31	3.28	3.59	4.08	3.92
Norway	1.28	1.01	0.93	0.73	0.64
Pacific Islands	0.07	0.06	0.08	0.09	0.10
Philippine Islands	0.13	0.12	0.16	0.21	0.13
Sweden	1.24	1.44	1.04	1.23	1.12
Switzerland	1.66	1.62	1.48	1.32	1.49
United States of America ..	18.87	24.58	24.65	24.55	25.13
Other Foreign Countries ..	1.11	1.17	1.14	1.59	1.51
Total Foreign Countries ..	36.25	42.30	42.29	43.53	45.39
Total	100	100	100	100	100

(*a*) Exclusive of Irish Free State.

The percentage of imports from the United Kingdom has declined during each year of the quinquennial period under review, the proportion decreasing from 51.90 per cent. in 1922–23 to 41.16 per cent in 1926–27. The most noticeable decline in the percentage therefrom occurred, however, in 1923–24, when a decrease of 6.66 per cent. compared with 1922–23 was experienced. Whilst the proportion of imports from the United Kingdom declined, that from the United States increased from 18.87 per cent. in 1922–23 to 25.13 per cent. in 1926–27. The value of imports from the last-mentioned country was £41,394,277 during 1926–27, as compared with £37,234,257 during 1925–26. The corresponding figures for the United Kingdom were £67,795,177 in 1926–27 and £65,840,655 in 1925–26. It is of interest to note, however, that imports from the United States included gold specie and bullion valued at £5,628,334 during 1924–25 and only £262 during 1926–27. Imports of merchandise from this country increased during the last year. The noticeable increase in the proportion of imports supplied by the South African Union during 1924–25 was due to imports of gold valued at £4,725,342. Imports from Germany increased from £2,821,789 in 1925–26 to £4,359,514 in 1926–27. There have been no outstanding alterations in the proportions of the imports supplied by other countries. Comparing the proportion of imports supplied by the United Kingdom during 1926–27 with that for 1922–23 it will be seen that there was a reduction of 10.74 per cent. Of this loss of trade British Possessions supplied 1.60 per cent., while the balance (9.14 per cent.) was received from foreign countries. The table on page 205 shows that, while imports from the United Kingdom are not seriously decreasing in actual value, trade with foreign countries is increasing rapidly.

3. Direction of Exports.—The following tables show a decreasing proportion of Australian exports to the United Kingdom, and increasing proportions to France, Belgium, Germany, Netherlands, Japan, and United States. Since the termination of the war there has been an increasing tendency towards direct shipment of the more important commodities, such as wool, skins, wheat, flour, butter, etc., to the consuming countries. The proportion of the total exports shipped to United Kingdom in 1922–23 was 44.10 per cent., but in each of the succeeding years the proportion was lower. The percentage (42.67 per cent.) in 1924–25 showed an upward trend compared with the previous year but was not maintained in subsequent years, and the proportion declined to 33.37 per cent. The value of exports shipped to the United States during 1923–24 showed a considerable decrease compared with the previous years. The figures show an upward trend during 1924–25 and 1925–26, principally due to large shipments of wool. The exports during 1926–27 were valued at £18,579,094, comprising merchandise, £8,578,504, and bullion and specie, £10,000,590. The outstanding items of merchandise in this total were: Wool, £4,080,960, and rabbit and hare skins, £2,235,269. The proportion of the total exports taken by the United States was 12.82 per cent. in 1926–27 as compared with 8.72 per cent. in 1925–26, the increase being due to the exports of gold during the later year. The value of imports from United States generally exceeds the value of exports from Australia to that country, but the difference has been very marked during the last three years, when the value of imports from United States has been no less than 29, 24, and 23 millions respectively in excess of the value of the Australian exports. Exports to Canada have increased during the past three years, the proportions rising from 0.20 per cent. in 1923–24 to 0.81 per cent. in 1926–27. The export trade with New Zealand has declined since 1924–25, owing mainly to smaller shipments of wheat, timber, and tobacco. The increase in the proportion of exports shipped to Germany was due to the greater quantity of wheat and wool forwarded thereto in recent years. The following table shows the value of exports from Australia to the more important countries during the five years 1922–23 to 1926–27 :—

EXPORTS FROM AUSTRALIA TO VARIOUS COUNTRIES, 1922–23 TO 1926–27.

(INCLUDING BULLION AND SPECIE.)

Country.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
United Kingdom	51,975,381	45,508,323	*a*69,147,229	*a*61,547,790	*a*48,351,780
British Possessions—					
Canada	364,732	235,947	716,953	858,934	1,171,687
Ceylon	814,435	2,453,465	831,911	506,095	478,598
Fiji	352,744	389,059	435,072	570,828	449,360
Hong Kong	501,874	776,998	635,174	671,824	463,041
India	3,107,584	1,201,777	2,002,562	3,364,968	3,537,343
Malaya (British)	1,343,029	1,549,220	1,528,303	2,132,016	1,930,250
Mauritius	134,997	126,586	123,299	66,190	109,188
New Zealand	4,302,281	5,008,152	5,812,565	4,947,590	4,239,297
Papua	219,225	214,839	259,302	250,678	223,298
South African Union	1,967,861	2,046,099	2,657,232	2,201,531	1,741,831
Other British Possessions ..	(*a*)977,326	(*a*)966,503	1,810,629	1,293,970	1,336,087
Total British Possessions ..	14,086,088	14,968,645	16,813,062	16,864,614	15,679,980
Total British Countries ..	66,061,469	60,476,968	85,960,231	78,412,404	64,031,760
Foreign Countries—					
Belgium	4,299,926	6,524,169	7,182,703	6,175,337	8,303,127
Chile and Peru	197,845	168,119	232,422	726,118	265,197
China	278,121	1,947,030	524,812	745,784	410,073
Egypt	1,583,785	2,321,083	3,008,741	2,919,742	3,853,649
France	12,296,665	14,388,846	19,932,721	18,549,742	17,627,139
Germany	4,186,864	4,402,913	7,372,049	6,985,720	9,908,685
Italy	5,950,726	4,633,185	10,014,185	4,654,818	5,514,300
Japan	9,309,560	11,555,484	11,646,516	11,043,159	10,362,990
Netherlands	840,818	1,911,114	1,819,871	1,088,639	1,309,668
Netherlands East Indies ..	1,862,864	1,602,013	2,045,882	2,163,691	2,052,857
Norway	47,696	34,275	122,812	183,432	76,800
Pacific Islands	451,280	367,784	407,162	437,001	448,585
Philippine Islands	568,648	523,618	529,405	563,369	483,722
Spain	932	317,034	466,517	216,083	76,651
Sweden	168,112	409,466	470,006	151,339	139,046
United States of America ..	9,630,770	7,109,496	9,153,279	12,953,877	18,579,094
Other Foreign Countries ..	334,066	294,567	1,141,345	591,954	1,451,840
Total Foreign Countries ..	51,808,678	59,010,196	76,069,928	70,149,805	80,863,423
Total	117,870,147	119,487,164	162,030,159	148,562,209	144,895,183

(*a*) Exclusive of Irish Free State.

4. Percentage of Exports to Various Countries.—The next table gives the relative proportions of the export trade of Australia with the countries specified, together with the proportions shipped to the United Kingdom, British Possessions and foreign countries respectively :—

EXPORTS FROM AUSTRALIA.—PERCENTAGES TO VARIOUS COUNTRIES, 1922–23 TO 1926–27.

Country.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	per cent.	per cent.	per cent.	per cent.	per cent.
United Kingdom	44.10	38.09	a 42.67	a 41.43	a 33.37
British Possessions—					
Canada	0.31	0.20	0.44	0.58	0.81
Ceylon	0.69	2.05	0.51	0.34	0.33
Fiji	0.30	0.32	0.27	0.39	0.31
Hong Kong	0.43	0.65	0.39	0.45	0.32
India	2.64	1.01	1.24	2.27	2.44
Malaya (British)	1.14	1.30	0.94	1.43	1.33
Mauritius	0.11	0.11	0.08	0.04	0.08
New Zealand	3.65	4.19	3.59	3.33	2.93
Papua	0.19	0.18	0.16	0.17	0.15
South African Union ..	1.67	1.71	1.64	1.48	1.20
Other British Possessions ..	a 0.83	a 0.81	1.12	0.87	0.92
Total British Possessions ..	11.96	12.53	10.38	11.35	10.82
Total British Countries ..	56.06	50.62	53.05	52.78	44.19
Foreign Countries—					
Belgium	3.65	5.46	4.43	4.16	5.73
Chile and Peru	0.17	0.14	0.14	0.49	0.18
China	0.24	1.63	0.32	0.50	0.28
Egypt	1.34	1.94	1.86	1.97	2.66
France	10.43	12.46	12.30	12.49	12.17
Germany	3.55	3.68	4.55	4.70	6.84
Italy	5.05	3.88	6.18	3.13	3.81
Japan	7.90	9.67	7.19	7.43	7.15
Netherlands	0.54	1.60	1.12	0.73	0.91
Netherlands East Indies ..	1.58	1.34	1.26	1.46	1.42
Norway	0.04	0.03	0.08	0.12	0.05
Pacific Islands	0.38	0.31	0.25	0.29	0.31
Philippine Islands	0.48	0.44	0.33	0.38	0.33
Spain	0.00	0.27	0.29	0.15	0.05
Sweden	0.14	0.34	0.29	0.10	0.10
United States of America ..	8.17	5.95	5.65	8.72	12.82
Other Foreign Countries ..	0.28	0.24	0.71	0.40	1.00
Total Foreign Countries ..	43.94	49.38	46.95	47.22	55.81
Total	100	100	100	100	100

(a) Exclusive of Irish Free State.

5. **Principal Imports and Exports—Countries.**—The total value of imports from, and exports to, each of the more important countries during 1926–27 in order of value of total trade, together with brief particulars of the principal commodities interchanged with such countries is given hereunder. Should further details be required reference may be made to the annual publication "Oversea Trade Bulletin, No. 24," issued by this Bureau, which gives details of the trade of 38 of the principal countries of the world with Australia during the past five years. This publication also furnishes information regarding the country of origin of each statistical item of imports for the years 1925–26 and 1926–27, showing the value and (where available) the quantity imported from each country. The value of each item imported into each State of the Commonwealth is also shown. The publication referred to also gives information as to the country to which each item of exports was shipped during these years.

United Kingdom. Total Imports of United Kingdom Origin, £67,795,177. The two outstanding classes of goods imported were—Machines, machinery and manufactures of metal, £25,543,644, and apparel, textiles, yarns, etc., £23,507,668. Imports of the undermentioned goods also contributed largely to the total:—Paper and stationery; drugs and chemicals; whisky; rubber and rubber manufactures; optical, surgical, and scientific instruments; chinaware and earthenware; glass and glassware; and fancy goods.

Total Exports to United Kingdom, £48,351,780. Of this total £47,957,389 represented Australian produce. The principal items of export were—Wool, £19,013,978; wheat, £7,458,462; and butter, £4,463,241. Other commodities which bulked largely were—Pig lead; frozen meats; hides and skins; dried and fresh fruits; flour; sugar (cane); wine; zinc; tallow; eggs; and tin.

United States of America. Total Imports of United States Origin, £41,394,277. The following were the more important items of import:—Motor chassis, bodies, etc., £9,159,286; petroleum and shale spirit, etc., £3,599,356; undressed timber, £2,452,640; unmanufactured tobacco, £1,919,574; rubber manufactures, £1,179,937; metal manufactures; apparel, textiles, etc.; electrical machinery, materials and appliances; motive-power machinery; lubricating (mineral) oil; kerosene; musical instruments; paper and stationery; sulphur; fish preserved in tins; and sausage casings.

Total Exports to United States, £18,579,094. Of this total £18,423,339 represented Australian produce. The principal exports were—Gold specie, £10,000,000; wool, £4,080,960; hides and skins, £3,283,620; sausage-casings; tin; and pearl-shell. The value of the exports of the above commodities represents 98 per cent. of the total exports to the United States.

France. Total Imports of French Origin, £4,767,163. Chief imports were—Piece goods of silk or containing silk, £1,169,616; trimmings for attire, £328,971; motor cars and parts, £247,907; furs, dressed; woollens; rubber manufactures; blouses and skirts, etc.; velvets, velveteens, plushes, etc.; paper and stationery; perfumery and toilet preparations; brandy; gums and resins; lace for attire; gloves; wine; piece goods of cotton and linen; hats and caps; fancy goods; and olive oil.

Total Exports to France, £17,627,139. Of this total £17,159,208 was Australian produce. Principal exports were—Wool, £13,164,721; wheat, £2,027,476; sheep skins, £1,773,983; copra; cattle hides; machinery; butter; and rabbit and hare skins.

Japan. Total Imports of Japanese Origin, £5,183,470. Principal imports—Piece goods of silk or containing silk, £3,163,160; cotton and linen piece goods, £595,992; raw silk; undressed timber; apparel and attire; china and porcelain ware; glass and glassware; brushware; oils; fancy goods; and fish.

Total Exports to Japan, £10,362,990. Of this total, £10,335,186 was Australian produce. Chief exports—Wool, £7,868,883; wheat, £1,171,533; tallow; zinc; pig lead; trochus shell; milk and cream; and infants' and invalids' food.

Germany. Total Imports of German Origin, £4,359,514. Principal imports—Machinery and metal manufactures, £1,259,743; apparel and textiles, £1,214,844; pianos, £288,506; paper and stationery, £197,501; toys, £158,035; paper; timepieces; fancy goods; bags and baskets; brushware; dyes; and fertilizers.

Total Exports to Germany, £9,908,685. Of this total, £9,878,387 was the produce of Australia. Chief exports were—Wool, £7,920,677 ; wheat, £586,977 ; hides and skins, £450,374 ; zinc, bars, blocks, etc., £261,750 ; pig lead, £98,896 ; apples ; zinc concentrates ; silver and silver-lead ore and concentrates ; beef ; sausage-casings ; and tallow.

India. Total Imports of Produce or Manufacture of India, £6,661,408. Bags and sacks valued at £4,306,600 represent 65 per cent. of the total imports. The other principal items were—Hessians, £610,758 ; tea, £542,071 ; linseed, £306,627 ; rice, £257,474 ; hides and skins ; kapok ; mats, matting of coir ; coffee and chicory ; gums and resins ; precious stones ; paraffin wax ; and spices.

Total Exports to India, £3,537,343. Of this total £3,531,036 represented Australian produce. The chief exports were—Gold, £1,348,358 ; silver, £896,291 ; wheat, £739,531 ; undressed timber ; tallow ; horses ; zinc ; wool ; and jams and jellies.

Belgium. Total Imports of Belgian Origin, £941,954. Principal imports were—Glass and glassware, £279,564 ; cotton and linen piece goods, £68,817 ; paper, £42,486 ; electrical machinery ; arms ; gloves ; furs and other skins ; and motor cars and parts.

Total Exports to Belgium, £8,303,127. Of this total £8,298,032 was the produce of Australia. Chief items were—Wool, £5,507,034 ; wheat, £1,347,823 ; silver and silver-lead ore and concentrates, £448,464 ; barley, £271,379 ; pig lead ; hides and skins ; copper in matte ; and beef.

Netherlands East Indies. Total Imports of Netherlands East Indies Origin, £6,451,688. The principal imports were—Petroleum spirit, including benzine, etc., £3,045,506 ; tea, £1,614,131 ; crude petroleum, £503,757 ; kapok, £387,689 ; crude rubber ; kerosene ; flax and hemp ; and coffee and chicory.

Total Exports to Netherlands East Indies, £2,052,857. Of this total £2,041,827 was the produce of Australia. Chief exports were—Flour, £869,272 ; butter, £453,089 ; leather, £105,584 ; preserved milk and cream ; coal ; biscuits ; bacon and hams ; soap ; medicines ; and meats, preserved in tins.

New Zealand. Total Imports of New Zealand Origin, £3,123,038. The principal items were—Timber, £551,476 ; hides and skins, £402,263 ; gold, £423,427 ; butter, £518,992 ; meats, £107,882 ; flax and hemp, £128,525 ; wool ; potatoes ; grain and pulse ; fish ; horses ; linseed and other seeds ; and oakum and tow.

Total Exports to New Zealand, £4,239,297. Of this total £3,471,843 was Australian produce. The chief items were—Wheat, £304,053 ; coal, £490,604 ; machinery and metal manufactures, £504,454 ; flour, £376,975 ; timber, £376,692 ; manufactured tobacco, £62,667 ; apparel, textiles, and manufactured fibres, £211,261 ; fruits, dried and fresh ; confectionery ; tea ; and talking machines, phonographs, etc.

Italy. Total Imports of Italian Origin, £1,564,843. Chief imports were—Motor cars and parts, £263,707 ; silk piece goods, £1,232,421 ; hats, £217,343 ; edible nuts, £104,364 ; pneumatic tyres ; hides and skins ; essential oils ; marble ; and flax and hemp.

Total Exports to Italy, £5,514,300. Of this total, £5,471,939 was Australian produce. Chief exports were—Wheat, £2,970,063 ; wool, £2,156,454 ; hides and skins, £198,384 ; tallow, £118,413 ; copra ; and beef.

Canada. Total Imports of Canadian Origin, £4,324,421. The principal imports were—Chassis for motor cars, £1,083,529 ; printing paper, £683,944 ; fish preserved in tins, £489,717 ; agricultural, etc., implements and machinery, £361,591 ; rubber manufactures £354,568 ; undressed timber, £144,052 ; wrapping and other paper, £83,241 ; motive power machinery ; dressed timber ; boots and shoes ; electrical machinery and appliances ; gloves ; and iron and steel pipes and tubes.

Total Exports to Canada, £1,171,687. Of this total £1,162,403 was Australian produce. Chief items were—Sugar (cane), £869,717 ; fruits dried, £76,436 ; wool—greasy, scoured, and tops, £69,695 ; hides and skins ; and meats.

Malaya (British). Total Imports of (British) Malayan Origin, £2,025,757. Principal items were—Rubber and manufactures thereof, £1,724,713 ; spices, £140,606 ; sago and tapioca, £49,913 ; fruits and vegetables, preserved ; tin ingots ; gums and resins ; tobacco, unmanufactured ; and crude petroleum.

Total Exports to Malaya (British), £1,930,250. Of this total, £1,840,822 was the produce of Australia. Chief exports were—Preserved milk and cream, £665,351; flour, £569,551; butter, £104,884; frozen meats, £75,340; timber, undressed £67,322; soap, £42,942; mining machinery; coal; fruits, fresh and preserved; bacon and hams; leather; and sheep.

Pacific Islands (British and Foreign). Total Imports of Produce of the Pacific Islands, £2,118,073. Chief items were—Rock phosphates, £981,455; copra, £746,144; gold bullion, £166,416; cocoa beans; hides and skins; raw cotton; molasses, etc.; and shells.

Total Exports to Pacific Islands, £1,780,706. Of this amount £1,176,548 was the produce of Australia. The exports to these islands cover a very wide range of commodities. The outstanding groups were—Foodstuffs of vegetable origin, £416,268; machines, machinery and metal manufactures, £233,711; foodstuffs of animal origin, £175,470; coal and coke, £162,177; apparel, textiles, etc., £151,681; and tobacco, cigars, and cigarettes, £127,169. The chief individual items were—Flour; meats; tobacco; coal; coke; bran, pollard and sharps; timber; cotton and linen piece goods; biscuits; sugar; rice; and ale, beer, etc.

Egypt. Total Imports of Egyptian Origin, £19,005. Chief items were—Gums and resins, £8,752; cigarettes, £2,895; and raw cotton, £1,124.

Total Exports to Egypt, £3,853,649. Principal items were—Flour, £2,274,392; wheat, £1,337,440; frozen meat, £117,590; and butter, £97,237.

South African Union. Total Imports of Produce of South African Union, £927,993. Principal items were—Precious stones, £403,496; maize, £273,276; fish, £98,152; asbestos, crude; tanning bark; raw cotton; tobacco; and feathers.

Total Exports to South African Union, £1,741,831. Of this total £1,735,449 was the produce of Australia. Chief exports were—Wheat, £581,737; timber, £554,298; flour, £242,246; preserved milk and cream, £104,539; tallow, £77,533; gelatine and glue of all kinds; butter; sheep; and soap.

Ceylon. Total Imports of Ceylon Origin, £2,153,219. The chief items were—Tea, £1,649,387; crude rubber, £298,220; nuts, £101,757; fibres; cocoa beans; and yarns.

Total Exports to Ceylon, £478,598. Of this total £474,806 was Australian produce. The principal exports were—Flour, £200,912; undressed timber, £98,950; butter; frozen meats; preserved milk; and silver—bar, ingot.

Switzerland. Total Imports of Swiss Origin, £2,458,810. Chief items were—Piece goods of silk, £990,595; clocks and watches, £327,608; trimmings and ornaments for attire, £290,881; handkerchiefs; cheese; talking machines; lace for attire; and other apparel and textiles.

Total Exports to Switzerland, £16,099. Chief item was—timepieces and parts, £8,246.

Netherlands. Total Imports of Netherlands Origin, £1,092,242. Principal items were—Electrical machinery and appliances, £299,942; asphalt, bitumen, and natural pitch, £106,158; caramel, caramel paste, cocoa butter, etc., £63,841; jewellery, £57,383; paper; piece goods; marine, mining and similar dredges; glass and glassware; gin; and drugs and chemicals.

Total Exports to Netherlands, £1,309,668. Chief exports were—Wheat, £931,874; copra, £140,964; wool, £89,078; tallow, £44,178; and hides and skins, £38,938.

Sweden. Total Imports of Swedish Origin, £1,847,290. Chief items were—Timber, £462,990; paper, £437,507; matches, £166,087; wood pulp, £150,953; dairy implements and machinery, £128,655; vacuum cleaners, £101,058; paper boards; electrical machinery and appliances and roller bearings and ball bearings.

Total Exports to Sweden, £139,046. Chief items were—Wheat, £44,450; wool, £39,772; hides—cattle, £30,908; and apples.

China. Total Imports of Chinese Origin, £785,068. The principal items were—Edible nuts, £116,810; tea, £92,331; rice, £54,673; silk piece goods, £42,610; bristles. horsehair drafts, £42,364; ginger, £38,625; oils; lace for attire; and grass straw.

Total Exports to China, £410,073. Of this total £404,348 was Australian produce. Principal items were—Sandalwood, £114,626; leather, £194,798; butter, £67,999; milk and cream, £43,692; timber; tallow; jams and jellies; and precious stones.

Norway. Total Imports of Norwegian Origin, £1,055,020. Principal items were—Dressed timber, £487,284; paper, £264,440; preserved fish, £209,666; ores, clays, etc.: calcium carbide; and wood pulp.

Total Exports to Norway, £76,800. Of this total the principal items were fish oils, £66,950; apples, £6,521; and wool, £2,384.

Philippine Islands. Total Imports of Philippine Islands Origin, £215,176. Chief items were—Hemp. £98,941; timber, £88,373; hats and caps; and tobacco and cigars.

Total Exports to Philippine Islands, £483,722. Principal items were—Frozen meats. £137,253; flour, £123,602; coal, £98,108; butter; cattle; and bacon and hams.

Hong Kong. Total Imports of Hong Kong Origin, £7,738. Chief items were—Ginger, £2,692; clouded bamboo, £2,251; and grass straw.

Total Exports to Hong Kong, £463,041. Chief items were—Sandalwood, £116,408; leather and manufactures thereof, £92,791; butter, £52,304; flour, £46,828; frozen meats, £40,246; bêche-de-mer; pig lead; and bacon and hams.

Spain. Total Imports of Spanish Origin, £204,638. Chief items were—Corks, etc., £79,999; edible nuts, £64,822; wine; liquorice; and raisins.

Total Exports to Spain, £76,651. Chief item was wheat, £67,373.

Russia. Total Imports of Russian Origin, £70,854. Chief items were—Bristles. horsehair drafts; dressed furs; herrings in tins; and hides and skins.

Total Exports to Russia, £1,092. Chief item was wool, £948.

6. Imports—States, and Total.—Imports are recorded at the port of landing and are credited to the State in which the port is situated. Records are not obtainable of interstate trade, and the State totals represent, therefore, the value of oversea goods consigned to the various States. They do not, moreover, represent the consumption within each State. Figures for the last five years are given hereunder.

IMPORTS.—STATES, AND TOTAL, 1922–23 TO 1926–27.

State.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
New South Wales ..	55,010,083	58,225,180	66,321,757	64,009,929	68,933,904
Victoria	46,729,100	49,592,643	54,289,690	50,327,055	55,560,936
Queensland.. ..	10,782,906	11,605,668	12,833,375	13,772,854	13,497,758
South Australia ..	10,846,619	12,700,321	13,970,327	14,079,788	15,507,260
Western Australia ..	6,788,165	6,662,729	8,026,452	7,896,174	9,447,033
Tasmania	1,588,158	1,817,320	1,681,059	1,518,210	1,732,889
Northern Territory ..	12,804	14,432	20,636	34,168	36,814
Total	131,757,835	140,618,293	157,143,296	151,638,178	164,716,594

7. Exports—States, and Total.—The following table gives the value of exports shipped from each State during the last five years. It must be noted that the value of goods transferred from one State to another for shipment to oversea countries is shown as an export from the State from which the goods were finally despatched.

[illegible] EXPORTS.—STATES, AND TOTAL, 1922–23 TO 1926–27.

State.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
New South Wales ..	42,581,874	43,146,722	60,577,094	54,001,814	62,815,077
Victoria	33,768,701	29,612,548	41,641,979	33,107,576	34,741,689
Queensland.. ..	15,782,072	14,628,305	24,441,600	26,384,916	14,721,201
South Australia ..	13,583,003	16,912,932	19,225,027	19,450,144	17,123,012
Western Australia ..	9,679,496	12,412,625	12,859,498	12.611,631	13,067,922
Tasmania	2,460,374	2,766,032	3,243,017	2,970 226	2,396,496
Northern Territory ..	14,627	8,000	41,944	35,902	29,786
Total	117,870,147	119,487,164	162,030,159	148,562,209	144,895,183

8. **Trade of Principal Ports.**—The next table gives the value of imports received at, and exports despatched from, the principal ports of Australia during 1925–26 and 1926–27.

OVERSEA TRADE.—PRINCIPAL PORTS, 1925–26 AND 1926–27.

Port.	1925–26.			1926–27.		
	Imports.	Exports.	Total.	Imports.	Exports.	Total.
New South Wales.	£	£	£	£	£	£
Sydney	62,180,487	52,193,381	114,373,868	67,219,520	60,933,267	128,152,787
Newcastle ..	1,675,992	1,687,652	3,363,644	1,597,631	1,693,336	3,290,967
Other Ports ..	153,450	120,781	274,231	116,753	188,474	305,227
Total ..	64,009,929	54,001,814	118,011,743	68,933,904	62,815,077	131,748,981
Victoria.						
Melbourne ..	48,967,127	28,925,491	77,892,618	54,311,467	28,700,253	83,011,720
Geelong	1,218,449	2,560.718	3,779,167	1,066,601	3,971,106	5,037,707
Other ports ..	141,479	1,621,367	1,762,846	182,868	2,070,330	2,253,198
Total ..	50,327,055	33,107,576	83,434,631	55,560,936	34,741,689	90,302,625
Queensland.						
Brisbane ..	11,712,822	17,703,213	29,416,035	11,837,609	11,657,972	23,495,581
Rockhampton ..	511,075	1,348,547	1,859,622	383,728	377,600	761,328
Townsville ..	871,041	2,695,283	3,566,324	711,492	835,581	1,547,073
Other Ports ..	677,916	4,637,873	5,315,789	564,929	1,850,048	2,414,977
Total ..	13,772,854	26,384,916	40,157,770	13,497,758	14,721,201	28,218,959
South Australia.						
Port Adelaide, including Adelaide	13,821,826	10,918,882	24,740,708	15,236,904	10,617,222	25,854,126
Port Pirie ..	213,376	5,392,050	5,605,426	214,993	3,491,150	3,706,143
Wallaroo ..	44,586	1,962,786	2,007,372	55,363	1,626,042	1,681,405
Other Ports ..	..	1,176,426	1,176,426	..	1,388,598	1,388,598
Total ..	14,079,788	19,450,144	33,529,932	15,507,260	17,123,012	32,630,272
Western Australia.						
Fremantle (Perth)	7,668,231	9,808,020	17,476,251	9,213,720	9,621,436	18,835,156
Bunbury ..	50,921	913,872	964,793	61,070	1,277,856	1,338,926
Other Ports ..	177,022	1,889,739	2,066,761	172,243	2,168,630	2,340,873
Total ..	7,896,174	12,611,631	20,507,805	9,447,033	13,067,922	22,514,955

OVERSEA TRADE.—PRINCIPAL PORTS, 1925–26 AND 1926–27—*continued.*

Port.	1925–26. Imports.	1925–26. Exports.	1925–26. Total.	1926–27. Imports.	1926–27. Exports.	1926–27. Total.
	£	£	£	£	£	£
Tasmania.						
Hobart	903,637	2,285,377	3,189,014	999,273	1,730,328	2,729,601
Launceston ..	546,576	475,322	1,021,898	664,857	510,329	1,175,186
Other Ports ..	67,997	209,527	277,524	68,759	155,839	224,598
Total ..	1,518,210	2,970,226	4,488,436	1,732,889	2,396,496	4,129,385
Northern Territory.						
Port Darwin ..	34,168	35,902	70,070	36,814	29,786	66,600
Grand Total	151,638,178	148,562,209	300,200,387	164,716,594	144,895,183	309,611,777

§ 6. Exports to Eastern Countries.

1. **Principal Articles Exported.**—The following table shows the value of exports from Australia to Eastern countries during the last five years. The principal countries concerned in this trade are China, India and Ceylon, Japan, Netherlands East Indies and Timor (Portuguese), Philippine Islands, Malaya (British), and Hong Kong. The particulars given in the tables apply to these countries only.

EXPORTS FROM AUSTRALIA TO EASTERN COUNTRIES.—PRINCIPAL COMMODITIES, 1922–23 TO 1926–27.

Articles.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
Antimony	298	..	..	10	..
Biscuits	62,197	62,371	63,233	117,266	92,263
Butter	780,325	678,384	698,365	794,427	761,496
Cheese	11,527	10,295	8,029	11,299	12,109
Coal	397,632	357,230	258,561	211,899	215,701
Copper	22,350	51,546	14,170	19,620	17,558
Grain and pulse—					
Wheat	986,596	3,996,125	2,229,079	4,058,427	1,991,125
Flour	1,353,990	1,618,877	1,576,034	2,262,492	1,827,140
Other (prepared and unprepared) ..	9,882	33,864	16,345	13,911	19,708
Hay, chaff, and compressed fodder ..	18,576	21,272	22,787	22,082	30,956
Horses	82,834	21,713	93,077	105,092	104,048
Iron and steel (unmanufactured) ..	4,472	618	601	5,280	19,745
Jams and jellies	59,613	67,377	60,965	66,010	60,681
Lead, Pig	644,848	533,770	554,082	375,148	144,737
Leather	242,681	366,578	330,393	424,160	326,696
Meats	397,005	426,174	399,315	477,799	488,038
Milk and cream	1,140,775	1,002,687	1,385,142	1,334,861	921,597
Pearl shell and trochus shell	56,531	37,300	63,696	95,522	87,263
Sandalwood	110,822	357,025	205,477	252,800	251,625
Skins, hoofs, horns, bones, sinews, tallow	523,619	648,012	804,308	690,184	651,228
Sulphate of ammonia	47,249	34,053	38,411	56,054	30,079
Timber (undressed)	87,161	195,742	56,269	199,959	332,129
Wool	6,124,687	6,343,014	7,609,507	5,890,777	7,892,553
Other merchandise	1,338,978	1,439,621	1,291,933	1,299,378	1,166,943
Total merchandise	14,504,648	18,303,648	17,779,779	18,784,457	17,445,418
Specie, and gold and silver bullion ..	3,284,263	3,307,936	1,966,739	2,407,467	2,274,885
Total Exports	17,788,911	21,611,584	19,746,518	21,191,924	19,720,303

2. Destination of Exports.—The next table shows the destination of the merchandise exported to Eastern countries during the last five years.

EXPORTS FROM AUSTRALIA OF MERCHANDISE TO PRINCIPAL EASTERN COUNTRIES.—DESTINATION, 1922–23 TO 1926–27.

Country.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
China	244,810	1,589,414	454,061	745,784	410,073
East Indies	1,865,660	1,603,992	2,045,701	2,131,407	2,050,872
Hong Kong	501,874	776,998	631,973	661,979	463,041
India and Ceylon	711,432	739,712	943,820	1,524,743	1,757,470
Japan	9,308,960	11,555,484	11,646,516	11,043,159	10,362,990
Malaya (British)	1,303,264	1,514,430	1,528,303	2,114,016	1,917,250
Philippine Islands	568,648	523,618	529,405	563,369	483,722
Total	14,504,648	18,303,648	17,779,779	18,784,457	17,445,418

3. Chief Exports to Eastern Countries.—The series of tables given hereunder shows the value of each of the principal articles exported to the countries specified during each of the last five years.

BUTTER.

Country.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
China	43,123	61,571	64,879	50,408	67,999
East Indies	503,267	439,086	450,084	474,639	453,410
Hong Kong	44,411	34,968	45,271	91,605	52,304
India and Ceylon ..	26,150	24,060	25,588	27,247	40,246
Japan	30,358	19,676	6,511	9,897	8,089
Malaya (British)	98,877	67,523	75,814	100,730	104,884
Philippine Islands ..	34,139	31,500	30,218	39,901	34,564
Total	780,325	678,384	698,365	794,427	761,496

The exports of butter given above for the year 1926–27 were shipped from the several States as follows:—New South Wales, £158,508; Victoria, £542,884; Queensland, £59,572; South Australia, £532.

COAL.

Country.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
East Indies	76,519	101,369	88,637	71,116	85,496
Hong Kong	2,259	..	..	..	..
India and Ceylon ..	118,912	18,860	21,997	3,794	1
Japan	889	..	..	..	..
Malaya (British)	48,065	76,913	43,881	12,196	32,096
Philippine Islands ..	150,988	160,088	104,046	124,793	98,108
Total	397,632	357,230	258,561	211,899	215,701

The exports of coal are chiefly from New South Wales.

GRAIN AND PULSE.—WHEAT.

Country.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
China	10,003	1,014,864	..	304,882	..
East Indies	..	28	..	..	79,493
India and Ceylon ..	296	268	529	397,329	740,099
Japan	976,271	2,980,952	2,228,549	3,356,144	1,171,533
Malaya (British)	7	13	1	38	..
Philippine Islands ..	19	..	..	34	..
Total	986,596	3,996,125	2,229,079	4,058,427	1,991,125

The exports of wheat given for the year 1926–27 were shipped from the following States :—New South Wales, £33,521 ; Victoria, £956,900 ; South Australia, £478,423 ; Western Australia, £522,281.

GRAIN AND PULSE.—FLOUR.

Country.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
China	3,140	128,498	3,312	1,952	3,732
East Indies	628,414	559,149	645,365	975,826	869,636
Hong Kong	71,891	126,273	181,599	127,803	46,828
India and Ceylon ..	98,828	104,747	149,582	266,553	204,082
Japan	19,337	162,048	2,164	10,254	9,709
Malaya (British)	404,952	393,035	444,257	712,710	569,551
Philippine Islands ..	127,428	145,127	149,755	167,394	123,602
Total	1,353,990	1,618,877	1,576,034	2,262,492	1,827,140

The flour exported during 1926–27 as above, was shipped from the several States as follows :—New South Wales, £728,063 ; Victoria, £794,667; Queensland, £225 ; South Australia, £76,151 ; Western Australia, £228,034.

HORSES.

Country.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
China	110	140	480	..	200
East Indies	4,555	2,480	2,438	7,880	6,630
Hong Kong	..	100	..	..	
India and Ceylon ..	71,274	9,726	71,255	75,287	86,181
Japan	1,260	3,596	11,357	10,100	765
Malaya (British)	5,285	4,380	6,130	11,738	10,030
Philippine Islands ..	350	1,291	1,417	87	242
Total	82,834	21,713	93,077	105,092	104,048

The value of horses exported to the above countries from each State during 1926–27 was as follows :—New South Wales, £31,152 ; Victoria, £17,807 ; Queensland, £45,259 ; South Australia, £9,420 ; Western Australia, £410.

LEAD, PIG.

Country.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
China	15,196	49,714	84,512	28,396	..
Hong Kong	67,512	63,865	65,424	54,734	15,225
Japan	562,140	419,988	404,146	292,018	126,819
Philippine Islands ..	..	203	..	..	2,693
Total	644,848	533,770	554,082	375,148	144,737

The exports of pig lead in 1926–27 were all shipped from New South Wales.

LEATHER.

Country.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
China	34,403	82,338	82,859	155,683	94,821
East Indies	92,823	98,893	104,742	113,734	106,673
Hong Kong	73,785	154,755	101,892	102,404	92,791
India and Ceylon ..	3,285	3,424	4,696	4,322	3,521
Japan	..	441	5,098	737	183
Malaya (British).. ..	35,077	23,762	28,868	45,292	27,389
Philippine Islands ..	3,308	2,965	2,238	1,988	1,318
Total	242,681	366,578	330,393	424,160	326,696

The exports shown above for 1926–27 were shipped from the following States :—New South Wales, £209,575 ; Victoria, £85,779 ; Queensland, £21,691 ; South Australia, £388 ; and Western Australia, £9,263.

MEATS.—PRESERVED BY COLD PROCESS.

Country.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
China	1,416	..	7,915	..	3,812
East Indies	17,028	8,539	5,629	8,170	9,217
Hong Kong	21,720	36,263	21,007	44,017	42,390
India and Ceylon ..	20,476	21,732	25,055	22,748	25,818
Japan	5,813	23,067	11,317	5,190	22,671
Malaya (British)	77,026	64,389	75,324	71,642	75,340
Philippine Islands ..	80,649	118,884	115,747	136,691	137,253
Total	224,128	272,874	261,994	288,458	316,501

The exports to the above-mentioned Eastern countries during 1926–27 of meats preserved by cold process were shipped from the following States :—New South Wales, £68,920 ; Victoria, £19,448 ; Queensland, £220,984 ; Western Australia, £7,149.

MEATS.—OTHER THAN MEATS PRESERVED BY COLD PROCESS.

Country.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
China	5,621	3,757	3,063	4,873	2,574
East Indies	75,409	66,459	66,099	89,319	72,040
Hong Kong	9,410	11,126	8,385	15,915	13,583
India and Ceylon ..	26,229	10,048	12,879	12,754	26.335
Japan	2,251	17,611	661	130	149
Malaya (British)	28,789	24,047	19,497	34,916	29,685
Philippine Islands ..	25,168	20,252	26,737	31,434	27,171
Total	172,877	153,300	137,321	189,341	171,537

The exports given above for the year 1926–27 were shipped from the following States :—New South Wales, £85,054 ; Victoria, £32,384 ; Queensland, £53.929 ; South Australia, £134 ; Western Australia, £36.

MILK AND CREAM.

Country.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
China	4,643	10,375	40,320	35,763	43.692
East Indies	159,810	90,752	455.688	93.361	106,980
Hong Kong	19,889	40,310	36.333	8.212	8.729
India and Ceylon ..	53,006	27,638	168,903	215,512	30,020
Japan	494,183	340,939	169,114	107,704	61,103
Malaya (British)	356.398	492,116	511,077	869.098	665.351
Philippine Islands	52,846	557	3,707	5,211	5,727
Total	1,140.775	1,002.687	1,385,142	1,334.861	921,602

Of the above exports of milk and cream, Victoria in 1926–27 exported £920.641 ; New South Wales, £960 ; and Queensland, £1.

SANDALWOOD.

Country.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
China	30,876	83,415	53,031	66,639	114,626
East Indies	3	..	..	245	403
Hong Kong	66,460	222,300	113,551	155,139	116.408
India and Ceylon ..	8,161	6,192	11,574	12,437	9,404
Malaya (British)	5,322	45,118	27,321	18,340	10,784
Total	110,822	357,025	205,477	252,800	251,625

The exports of sandalwood in 1926–27 were shipped from Queensland, £5,717; South Australia, £46,986 ; Western Australia, £198,888 ; Northern Territory, £34.

SKINS, HOOFS, HORNS, BONES, SINEWS, AND TALLOW.

Country.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
China	14,522	39,374	62,729	31,991	15,314
East Indies	4,040	3,315	5,420	4,594	1,489
Hong Kong	8,369	17,018	8,460	4,163	8,567
India and Ceylon ..	65,934	48,244	101,499	98,611	115,503
Japan	424,462	533,498	617,804	545,834	500,241
Malaya (British)	2,170	6,489	8,213	3,465	10,065
Philippine Islands ..	4,122	74	183	1,526	49
Total	523,619	648,012	804,308	690,184	651,228

The above exports of skins, etc., in 1926–27 were shipped from the several States as follows:—New South Wales, £439,155; Victoria, £92,391; Queensland, £96,791; South Australia, £22,410; Western Australia, £438; Northern Territory, £43.

TIMBER, UNDRESSED.

Country.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
China	27,418	36,951	197	17,032	21,787
East Indies	16	53	..	17	89
Hong Kong	3,883	..	..	1,618	12,566
India and Ceylon ..	47,860	156,638	56,072	180,426	229,722
Japan	2,169	2,100	..	841	618
Malaya (British)	5,045	..	..	25	67,347
Philippine Islands ..	770	..	..	..	..
Total	87,161	195,742	56,269	199,959	332,129

The above exports of undressed timber during 1926–27 from the several States were shipped as follows:—New South Wales, £6,304; Victoria, £155; Queensland, £9; South Australia, £3; Western Australia, £325,658.

WOOL.

Country.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
China	14,093	753	4,444	..	..
India and Ceylon ..	11,487	123,550	108,522	14,897	23,670
Japan	6,095,616	6,212,881	7,479,586	5,869,969	7,868,883
Malaya (British)	..	..	6,030	323	..
Philippine Islands ..	3,491	5,830	10,925	5,588	..
Total	6,124,687	6,343,014	7,609,507	5,890,777	7,892,553

The value of wool exported to the East by each State during 1926–27 was as follows:—New South Wales, £4,816,898; Victoria, £1,922,734; Queensland, £1,095,059; South Australia, £57,672; Western Australia, £190.

§ 7. Classified Summary of Australian Trade.

1. **Imports.**—The following table shows the value of imports into Australia during each of the last five years, arranged in classified order in accordance with the statistical classification which came into operation on 1st July, 1922:—

AUSTRALIAN IMPORTS.—IN CLASSES, 1922–23 TO 1926–27.

Classes.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
I. Animal foodstuffs, etc. ..	1,770,241	2,204,883	1,978,092	2,473,756	3,099,388
II. Vegetable foodstuffs; non-alcoholic beverages, etc. ..	5,577,649	6,548,204	6,435,786	7,087,836	7,555,734
III. Alcoholic liquors, etc. ..	1,864,738	2,102,219	2,177,281	2,297,738	1,815,608
IV. Tobacco, etc.	2,232,910	3,213,264	2,410,190	2,760,176	2,704,754
V. Live animals	113,808	172,349	163,439	183,287	167,030
VI. Animal substances, etc. ..	960,784	1,398,676	1,202,670	1,128,242	1,732,169
VII. Vegetable substances, etc. ..	2,854,308	2,844,905	3,223,837	3,568,614	3,484,472
VIII. Apparel, textiles, etc. ..	44,570,027	38,482,446	42,372,272	39,055,392	42,416,966
IX. Oils, fats, and waxes ..	5,987,331	7,383,879	8,559,132	10,065,509	10,977,790
X. Paints and varnishes ..	564,038	635,814	657,075	705,748	814,378
XI. Stones and minerals, etc. ..	339,222	698,248	590,092	766,510	943,451
XII. Metals, metal manufactures, and machinery	35,203,294	43,751,850	45,594,102	45,498,784	51,282,063
XIII. Rubber and leather, etc. ..	2,643,498	3,497,381	3,384,270	5,727,019	5,593,757
XIV. Wood and wicker, etc. ..	4,767,841	6,218,902	5,046,136	5,911,637	5,516,478
XV. Earthenware, etc.	2,205,799	2,441,288	2,529,697	2,455,818	2,610,647
XVI. Paper and stationery ..	6,275,837	6,443,226	6,845,778	7,126,461	7,936,028
XVII. Jewellery, etc.	2,405,779	2,477,695	2,648,680	2,746,403	2,849,587
XVIII. Optical, surgical, and scientific instruments ..	1,189,254	1,472,669	1,657,928	1,843,897	1,853,812
XIX. Drugs, chemicals, etc. ..	3,895,988	3,878,526	4,120,460	4,316,482	5,027,180
XX. Miscellaneous	6,281,525	4,669,017	4,997,886	5,492,195	5,692,076
XXI. Gold and silver; and bronze specie	53,964	82,852	10,548,493	426,674	643,226
Total	131,757,835	140,618,293	157,143,296	151,638,178	164,716,594

2. **Exports.**—In the appended tables the exports from Australia are shown in classes according to the same classification, distinguishing (*a*) Australian Produce; (*b*) Other Produce (Re-exports); and (*c*) Total Exports.

EXPORTS FROM AUSTRALIA.—IN CLASSES, 1922–23 TO 1926–27.

Classes.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
			(*a*) AUSTRALIAN PRODUCE.		
	£	£	£	£	£
I. Animal foodstuffs, etc. ..	15,498,298	9,717,734	19,280,478	16,415,297	12,105,989
II. Vegetable foodstuffs; non-alcoholic beverages, etc. ..	16,588,345	23,550,639	48,453,202	33,673,876	32,689,285
III. Alcoholic liquors, etc. ..	222,457	271,380	226,600	404,009	875,036
IV. Tobacco, etc.	620,430	380,127	381,504	265,627	137,485
V. Live animals	237,674	125,873	234,279	221,876	246,348
VI. Animal substances, etc. ..	64,284,144	63,047,851	72,024,630	72,116,824	69,168,778
VII. Vegetable substances, etc. ..	441,745	792,521	754,645	676,292	398,192
VIII. Apparel, textiles, etc. ..	171,619	260,437	173,830	177,401	164,180
IX. Oils, fats, and waxes ..	1,775,599	969,655	1,839,925	1,825,232	1,589,341
X. Paints and varnishes ..	59,462	39,325	49,877	46,945	47,306
XI. Stones and minerals, etc. ..	3,171,607	3,371,002	2,847,183	3,239,825	2,174,545
XII. Metals, metal manufactures, and machinery	4,895,991	5,905,199	6,607,261	7,053,623	6,126,750
XIII. Rubber and leather, etc. ..	911,652	945,034	774,682	782,138	655,949
XIV. Wood and wicker, etc. ..	1,116,025	1,334,668	1,662,163	1,421,842	1,492,037
XV. Earthenware, etc.	79,417	81,375	89,993	93,199	89,426
XVI. Paper and stationery ..	141,309	168,359	158,590	156,809	157,194
XVII. Jewellery, etc.	91,123	151,130	98,763	132,991	103,675
XVIII. Optical, surgical, and scientific instruments ..	58,336	72,990	63,727	96,556	159,653
XIX. Drugs, chemicals, etc. ..	505,228	501,598	545,309	601,642	615,884
XX. Miscellaneous	536,272	582,783	610,472	619,636	605,790
XXI. Gold and silver; and bronze specie	3,344,576	3,892,865	2,065,304	5,473,436	12,303,031
Total	114,751,309	116,162,545	158,942,417	145,495,074	141,905,874

EXPORTS FROM AUSTRALIA.—IN CLASSES, 1922–23 TO 1926–27—*continued.*

(*b*) OTHER PRODUCE.—RE-EXPORTS.

Classes.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
I. Animal foodstuffs, etc. ..	77,391	61,228	17,906	24,074	39,598
II. Vegetable foodstuffs; non-alcoholic beverages, etc. ..	435,999	544,313	518,744	359,249	283,405
III. Alcoholic liquors, etc. ..	77,246	78,268	82,036	47,069	35,322
IV. Tobacco, etc.	63,063	57,358	88,173	79,820	83,657
V. Live animals	12,977	10,517	24,486	5,408	10,363
VI. Animal substances, etc. ..	37,865	22,448	31,131	54,893	33,618
VII. Vegetable substances, etc. ..	615,748	546,820	534,749	576,471	680,755
VIII. Apparel, textiles, etc. ..	616,394	411,417	426,516	375,336	381,919
IX. Oils, fats, and waxes ..	94,646	126,056	183,463	136,630	78,053
X. Paints and varnishes ..	7,200	4,794	8,242	10,812	8,623
XI. Stones and minerals, etc. ..	4,583	2,957	2,786	2,048	2,375
XII. Metals, metal manufactures, and machinery	417,070	427,224	495,501	526,400	593,994
XIII. Rubber and leather, etc. ..	76,847	49,142	54,723	35,908	66,136
XIV. Wood and wicker, etc. ..	52,075	56,638	56,033	50,203	44,640
XV. Earthenware, etc.	20,140	16,917	15,152	17,029	13,849
XVI. Paper and stationery ..	100,718	155,064	83,319	87,482	76,838
XVII. Jewellery, etc.	103,866	51,679	77,376	100,948	124,140
XVIII. Optical, surgical, and scientific instruments ..	84,578	104,917	105,638	94,749	110,636
XIX. Drugs, chemicals, etc. ..	73,940	69,000	56,107	51,602	46,848
XX. Miscellaneous	145,892	527,585	222,361	377,309	268,340
XXI. Gold and silver; and bronze specie	600	277	3,300	53,695	6,200
Total	3,118,838	3,324,619	3,087,742	3,067,135	2,989,309

(*c*) TOTAL EXPORTS.—AUSTRALIAN PRODUCE AND RE-EXPORTS.

Classes.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
I. Animal foodstuffs, etc. ..	15,575,689	9,778,962	19,298,384	16,439,371	12,145,587
II. Vegetable foodstuffs; non-alcoholic beverages, etc. ..	17,024,344	24,094,952	48,971,946	34,033,125	32,972,690
III Alcoholic liquors, etc. ..	299,703	349,648	308,636	451,078	910,358
IV Tobacco, etc.	683,493	437,485	469,677	345,447	221,142
V Live animals	250,651	136,390	258,765	227,284	256,711
VI. Animal substances, etc. ..	64,322,009	63,070,299	72,055,761	72,171,717	69,202,396
VII. Vegetable substances, etc. ..	1,057,493	1,339,341	1,289,394	1,252,763	1,078,947
VIII. Apparel, textiles, etc. ..	788,013	671,854	600,346	552,737	546,099
IX. Oils, fats, and waxes ..	1,870,245	1,095,711	2,023,388	1,961,862	1,667,394
X. Paints and varnishes ..	66,662	44,119	58,119	57,757	55,929
XI. Stones and minerals, etc. ..	3,176,190	3,373,959	2,849,969	3,241,873	2,176,920
XII. Metals, metal manufactures, and machinery	5,313,061	6,332,423	7,102,762	7,580,023	6,720,744
XIII. Rubber and leather, etc. ..	988,499	994,176	829,405	818,046	722,085
XIV. Wood and wicker, etc. ..	1,168,100	1,391,306	1,718,196	1,472,045	1,536,677
XV. Earthenware, etc.	99,557	98,292	105,145	110,228	103,275
XVI. Paper and stationery ..	242,027	323,423	241,909	244,291	234,032
XVII. Jewellery, etc.	194,989	202,809	176,139	233,939	227,315
XVIII. Optical, surgical, and scientific instruments ..	142,914	177,907	169,365	191,304	270,289
XIX. Drugs, chemicals, etc. ..	579,168	570,598	601,416	653,244	662,732
XX. Miscellaneous	682,164	1,110,368	832,833	996,945	874,130
XXI. Gold and silver; and bronze specie	3,345,176	3,893,142	2,068,604	5,527,130	12,309,231
Total	117,870,147	119,487,164	162,030,159	148,562,209	144,895,183

3. **Imports of Principal Articles.**—The next table shows the quantity, where available, and the value of the principal articles imported into Australia. The articles are given in the order in which they appear in the detailed classification.

PRINCIPAL COMMODITIES IMPORTED.—AUSTRALIA, 1922–23 TO 1926–27.

Article.		1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
Fish preserved in tins	lb.	19,636,103	26,131,627	25,341,422	25,561,258	30,067,887
	£	867,708	1,158,048	1,120,428	1,164,223	1,418,105
Tea	lb.	47,666,500	48,501,876	49,256,308	47,087,973	52,428,163
	£	2,679,260	3,324,478	3,872,829	3,639,633	3,908,607
Whisky	gal.	1,068,180	1,189,479	1,257,801	1,349,086	925,710
	£	1,298,203	1,430,002	1,520,331	1,645,173	1,134,779
Tobacco, cigars, and cigarettes	£	2,232,910	3,213,264	2,410,190	2,760,176	2,704,754
Copra	cwt.	728,221	629,844	591,183	646,740	784,896
	£	787,941	697,569	707,859	826,442	918,164
Socks and stockings	£	2,071,703	1,467,860	1,701,032	1,645,621	1,659,624
Gloves	£	687,533	589,972	593,585	518,912	559,582
Hats and caps	£	489,671	504,243	556,473	691,667	870,124
Trimmings and ornaments ..	£	1,360,356	1,046,867	1,095,421	997,826	1,245,524
Carpets and carpeting ..	£	1,348,319	1,500,978	1,551,929	1,267,804	1,464,201
Floorcloths and linoleums ..	£	1,343,735	1,383,646	1,348,657	1,306,723	1,308,612
Piece Goods—						
Canvas and duck	£	1,092,226	972,137	895,574	914,514	836,142
Cotton and linen ..	£	12,643,947	10,333,107	10,932,661	10,850,581	10,028,947
Silk or containing silk ..	£	4,156,417	4,725,769	5,125,909	5,257,051	6,866,738
Woollen or containing wool ..	£	4,781,752	3,391,350	3,211,351	2,320,426	2,450,573
Sewing silks, cottons, etc. ..	£	1,377,717	1,100,575	1,192,531	917,818	895,434
Bags and sacks	£	2,610,497	2,719,393	4,048,847	4,188,115	4,316,592
Yarns—						
Cotton	£	376,903	376,192	444,017	494,901	836,487
Woollen	£	1,738,781	825,821	999,799	427,882	568,843
Kerosene	gal.	21,831,749	21,686,648	24,910,890	25,371,581	33,543,260
	£	789,635	849,429	862,389	921,271	1,264,257
Lubricating (mineral) oil	gal.	6,490,732	8,603,921	9,413,081	11,497,059	13,818,490
	£	614,454	761,187	864,700	942,952	1,158,357
Petroleum spirit, benzine, etc.	gal.	45,800,212	66,608,949	80,750,852	115,566,839	145,702,909
	£	3,485,228	4,206,846	5,379,163	6,519,015	6,648,567
Electrical machinery and appliances	£	3,382,886	3,591,701	4,954,417	4,721,523	5,755,495
Electrical cable and wire, covered	cwt.	208,646	218,659	183,433	216,452	317,919
	£	1,208,334	1,274,274	1,327,766	1,433,177	1,679,972
Agricultural machinery ..	£	472,718	674,005	784,024	761,766	722,094
Metal working machinery	£	282,014	422,363	427,166	476,974	599,252
Traction engines and road rollers	£	458,665	848,177	957,170	909,322	1,248,601
Iron and Steel—						
Pipes and tubes	£	1,237,053	1,448,875	1,389,130	1,590,127	1,691,954
Plate and sheet	£	4,435,835	4,854,074	5,011,845	4,181,354	4,723,733
Cutlery	£	724,686	878,137	899,860	872,086	984,835
Tools of trade	£	908,327	1,293,230	1,177,854	1,146,850	1,257,031
Motor cars, chassis, bodies, and parts	£	6,631,979	11,000,380	11,603,295	11,978,188	14,178,439
Rubber and rubber manufactures	£	2,004,883	2,934,931	2,919,389	5,273,954	5,085,980
Timber, undressed logs ..	£	2,790,936	4,076,056	3,141,415	3,795,111	3,455,414
Crockery	£	751,010	771,924	822,298	740,929	766,157
Glass and glassware	£	1,062,453	1,211,410	1,237,562	1,277,871	1,301,772
Paper, printing	£	2,295,130	2,440,537	2,793,832	2,853,232	3,232,956
Stationery and paper manufactures	£	2,220,893	2,388,060	2,389,286	2,649,472	2,781,311
Drugs, chemicals, and fertilizers	£	3,895,988	3,878,526	4,120,460	4,316,482	5,027,180
Musical instruments, pianos, etc.	£	740,292	1,329,804	1,370,983	1,240,556	1,450,828
All other articles	£	47,418,857	48,723,096	59,380,369	51,700,478	55,715,579
Total Imports ..	£	131,757,835	140,618,293	157,143,296	151,638,178	164,716,594

4. Exports of Principal Articles of Australian Produce.—The subjoined tabulation shows both quantity and value of the principal articles of Australian produce exported. The articles are given in the order in which they appear in the detailed classification.

PRINCIPAL COMMODITIES EXPORTED.—AUSTRALIA, 1922–23 TO 1926–27.

Article.		1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
Butter	centl.	789,754	654,409	1,452,813	978,998	765,165
	£	6,082,414	4,874,921	10,006,081	7,006,830	5,447,224
Cheese	centl.	54,544	37,877	103,540	68,728	36,438
	£	231,898	140,715	363,757	270,712	131,168
Eggs in shell	doz.	1,236,033	655,215	691,740	1,531,744	3,151,965
	£	102,946	52,715	53,518	116,681	233,670
Meats	£	7,664,536	3,531,496	7,037,850	7,455,403	5,198,812
Milk and cream	centl.	211,351	177,621	291,657	259,050	177,525
	£	1,325,883	1,079,943	1,694,230	1,476,205	1,080,963
Fruits, dried	centl.	359,769	432,489	782,830	550,520	633,620
	£	1,230,433	1,237,906	1,930,420	1,458,396	1,647,172
Fruits, fresh ..	centl.	1,083,597	789,223	1,013,176	1,496,545	757,598
	£	1,039,877	870,177	1,089,072	1,553,650	805,260
Barley	centl.	1,106,592	914,394	745,208	364,764	1,010,740
	£	432,326	318,912	420,432	142,948	383,103
Wheat	centl.	18,906,163	35,946,288	62,122,853	32,536,637	44,355,189
	£	8,469,574	13,979,342	34,613,713	17,187,388	20,785,414
Flour	centl.	7,890,014	10,223,828	8,960,939	10,020,633	9,869,282
	£	4,521,976	5,317,797	6,186,275	6,839,361	6,254,316
Sugar	cwt.	50,154	198,585	1,605,236	4,127,120	1,292,301
	£	85,286	264,011	2,091,379	5,253,156	1,679,523
Wine	gal.	700,830	985,598	875,565	1,718,048	3,077,588
	£	157,877	211,307	182,952	368,100	829,799
Tobacco	centl.	17,213	13,795	13,823	9,289	4,480
	£	598,067	357,789	361,473	245,484	117,732
Hides and skins	£	6,672,471	6,291,003	8,148,941	8,274,355	8,547,198
Wool (in terms of greasy wool)	centl.	8,238,396	5,786,558	5,795,158	8,810,019	8,277,997
	£	57,135,882	56,196,256	63,258,555	63,203,415	60,053,358
Pearl shell	cwt.	41,027	48,017	44,112	48,631	45,451
	£	320,602	377,313	413,095	391,695	352,626
Sandalwood	cwt.	157,994	285,812	133,283	164,702	172,309
	£	110,824	357,025	205,477	252,807	252,491
Tallow	cwt.	1,028,660	448,790	870,776	837,572	839,692
	£	1,634,741	850,898	1,731,229	1,609,673	1,415,888
Coal	ton	1,114,115	1,336,489	978,083	794,340	807,148
	£	1,200,167	1,460,148	1,079,584	881,679	965,899
Concentrates ..	cwt.	7,270,742	6,040,597	4,852,819	5,885,004	2,504,583
	£	1,706,005	1,612,213	1,397,641	2,029,619	979,928
Copper	cwt.	182,094	139,466	75,980	95,672	83,045
	£	664,471	467,195	235,982	280,961	161,411
Lead	cwt.	1,989,585	2,199,855	2,355,075	2,608,991	2,591,327
	£	2,561,616	3,323,463	4,154,448	4,524,142	3,852,792
Zinc—bar, block, dust	cwt.	495,059	640,635	652,600	582,253	547,190
	£	846,021	1,058,760	1,149,735	1,070,202	932,491
Tin	cwt.	36,225	40,041	32,558	35,816	37,206
	£	320,691	447,757	406,000	486,473	549,559
Leather	£	731,595	754,324	627,534	646,161	576,074
Timber, undressed	£	1,030,457	1,251,691	1,579,756	1,337,009	1,428,369
Soap	centl.	154,459	150,943	167,599	158,467	165,533
	£	269,760	249,699	303,166	289,239	291,346
Gold	£	2,228,026	2,812,253	944,739	4,318,072	11,367,771
Silver	£	1,116,545	1,080,612	1,120,565	1,155,355	935,230
All other articles	£	4,258,342	5,334,904	6,154,818	5,369,903	4,649,287
Total Exports (Australian Produce) ..	£	114,751,309	116,162,545	158,942,417	145,495,074	141,905,874

5. **Imports of Merchandise, Specie and Bullion.**—The table hereunder gives the value of imports into Australia during each of the last five years, grouped under the headings—Merchandise, and Specie and Bullion. The imports of merchandise are shown under the sub-headings of "free" and "dutiable" goods.

IMPORTS OF MERCHANDISE, SPECIE AND BULLION.—AUSTRALIA, 1922–23 TO 1926–27.

Year.	Merchandise.		Specie and Bullion.	Total Imports.
	Free Goods.	Dutiable Goods.		
	£	£	£	£
1922–23	43,749,955	87,977,056	30,824	131,757,835
1923–24	43,092,594	97,463,907	61,792	140,618,293
1924–25	49,827,415	96,773,074	10,542,807	157,143,296
1925–26	55,389,337	95,828,088	420,753	151,638,178
1926–27	59,188,128	104,939,631	588,835	164,716,594

6. **Exports of Merchandise, Specie and Bullion.**—The next table shows the value of exports from Australia during each of the last five years, grouped under the headings—Merchandise, and Specie and Bullion; giving the exports of Australian Produce and Other Produce separately.

EXPORTS OF MERCHANDISE, SPECIE AND BULLION.—AUSTRALIA, 1922–23 TO 1926–27.

Year.	Merchandise.		Specie and Bullion.		Total Exports. (a)
	Australian Produce.	Other Produce.	Australian Produce.	Other Produce.	
	£	£	£	£	£
1922–23	111,450,970	3,118,238	3,300,339	600	117,870,147
1923–24	112,350,326	3,324,342	3,812,219	277	119,487,164
1924–25	156,902,682	3,084,442	2,039,735	3,300	162,030,159
1925–26	140,059,350	3,013,440	5,435,724	53,695	148,562,209
1926–27	129,608,768	2,983,109	12,297,106	6,200	144,895,183

(a) Does not include the value of Ships' Stores. See later table

7. **Imports in Tariff Divisions.**—In the following table the imports into Australia during the last five years have been classified in accordance with the sixteen divisions of the Customs Tariff 1921–26.

IMPORTS CLASSIFIED ACCORDING TO DIVISIONS OF THE CUSTOMS TARIFF.—AUSTRALIA, 1922–23 TO 1926–27.

Tariff Division.	Imports.				
	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
I. Ale, Spirits, and Beverages	2,053,142	2,322,901	2,378,572	2,542,058	2,105,189
II. Tobacco and preparations thereof ..	2,232,910	3,213,264	2,410,190	2,760,176	2,704,754
III. Sugar	126,649	52,593	35,356	47,295	47,436
IV. Agricultural Products and Groceries ..	9,274,696	10,762,231	10,542,590	11,990,787	12,884,727
V. Textiles, Felts and Furs, and Manufactures thereof, and Attire	40,112,188	35,267,870	38,667,273	36,200,527	38,935,456
VI. Metals and Machinery	26,829,243	29,883,111	30,453,412	30,395,043	33,997,641
VII. Oils, Paints, and Varnishes	6,673,295	8,123,183	9,296,472	10,779,584	11,878,797
VIII. Earthenware, Cement, China, Glass, and Stone	2,837,598	3,103,866	3,260,919	3,443,166	3,458,945
IX. Drugs and Chemicals	2,691,018	2,587,796	2,716,011	2,907,140	3,234,162
X. Wood, Wicker, and Cane	4,767,841	6,218,902	5,046,136	5,911,637	5,514,674
XI. Jewellery and Fancy Goods	2,857,037	3,196,898	3,467,142	3,785,389	3,821,279
XII. Hides, Leather, and Rubber ..	3,007,484	3,926,855	3,857,376	6,179,311	6,116,816
XIII. Paper and Stationery	6,259,063	6,387,522	6,857,691	7,126,461	7,952,349
XIV. Vehicles	8,335,452	13,807,297	15,010,175	15,127,485	17,572,619
XV. Musical Instruments	741,815	1,332,776	1,373,312	1,241,344	1,452,955
XVI. Miscellaneous ..	10,847,830	7,557,313	8,344,792	7,627,608	9,094,214
— Free Goods not specially mentioned in Tariff	2,079,750	2,812,123	2,883,070	3,152,414	3,355,746
Total Merchandise	131,727,011	140,556,501	146,600,489	151,217,425	164,127 759
Specie and Bullion	30,824	61,792	10,542,807	420,753	588,835
Grand Total ..	131,757,835	140,618,293	157,143,296	151,638,178	164,716,594

§ 8. Excise.

While it does not come under the heading of oversea trade, the accompanying information in regard to Excise has been inserted here for purpose of convenience. The following table shows, in detail, the quantities of spirits, beer and tobacco on which Excise Duty was paid in Australia during each of the five years 1922–23 to 1926–27.

QUANTITIES OF SPIRITS, BEER, AND TOBACCO ON WHICH EXCISE DUTY WAS PAID.—AUSTRALIA, 1922–23 TO 1926–27.

Article.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	proof gal.	proof gal.	proof gal.	proof gal.	proof gal.
Spirits—					
Brandy (Pure Australian Standard Brandy) ..	158,492	185,340	201,251	224,956	233,269
Brandy (Blended Wine Brandy, etc) ..	14,016	13,815	8,944	2,699	1,670
Gin (Distilled from Barley, Malt, Grain, or Grape Wine, etc.)	54,503	54,870	47,948	50,821	51,469
Whisky (Australian Standard Malt Whisky) ..	143,190	148,088	127,251	183,622	204,060
Whisky (Australian Blended Whisky)	99	95	40	11	..
Rum (Australian Standard Rum)	468,952	520,516	511,917	557,611	552,401
Rum (Blended)	642	1,208	1,259	137	..
Liqueurs	635	138	333	312	1,041
Spirits, n.e.i.	2,756	2,035	169	448	2,144
Spirits for Industrial or Scientific Purposes ..	141,646	142,499	133,347	136,406	138,739
Spirits for Fortifying Wine (Distilled from Doradillo Grapes)(*b*)	..	..	(*b*)457,784	597,903	542,934
Spirits for Fortifying Wine	851,007	941,076	730,944	928,796	998,005
Spirits for making Vinegar	38,378	45,089	52,799	70,486	60,389
Spirits for Manufacture of Scents, etc.(*a*) ..	26,046	27,066	28,173	33,787	38,194
Amylic Alcohol and Fusel Oil	27	54	52	31	31
Total, Spirits ..	1,900,389	2,081,889	2,302,211	2,788,026	2,824,346
	gal.	gal.	gal.	gal.	gal.
Beer	63,195,280	63,202,012	64,939,563	67,372,272	70,105,029
	lb.	lb.	lb.	lb.	lb.
Tobacco—Manufactured, n.e.i.	11,894,776	12,208,264	12,586,337	13,007,572	13,125,604
Tobacco—Hand-made ..	471,147	561,628	489,913	407,156	321,258
Tobacco—Fine-cut, suitable for Cigarettes	33,804	29,025	27,490	21,628	24,228
Total, Tobacco ..	12,399,727	12,798,917	13,103,740	13,436,356	13,471,090
Cigars—Machine-made ..	52,812	38,879	45,178	33,107	40,841
Cigars—Hand-made ..	434,258	409,597	429,158	406,664	390,990
Total, Cigars ..	487,070	448,476	474,336	439,771	431,831
Cigarettes—Machine-made ..	4,410,713	4,739,115	4,827,649	5,016,871	5,212,345
Cigarettes—Hand-made ..	42,448	30,321	27,762	28,415	19,046
Total Cigarettes ..	4,453,161	4,769,436	4,855,411	5,045,286	5,231,391
Snuff	231	100	50	100	..

(*a*) Liquid gallons. (*b*) On and after 1st January, 1925.

§ 9. Ships' Stores.

Prior to 1906 goods shipped in Australian ports on board oversea vessels as ships' stores were included in the general exports. From 1906, ships' stores have been specially recorded as such, and have been omitted from the export figures. The value of these stores shipped each year during the period 1906 to 1926–27, showing bunker coal separately, is given in the following table:—

VALUE OF STORES SHIPPED IN AUSTRALIAN PORTS ON OVERSEA VESSELS, 1906 TO 1926–27.

Period.	Bunker Coal.	All Stores (including Coal).	Period.	Bunker Coal.	All Stores (including Coal).
	£	£		£	£
1906	575,471	875,966	1916–17 ..	748,852	1,676,116
1907	663,724	998,897	1917–18 ..	632,910	1,389,291
1908	867,707	1,196,106	1918–19 ..	857,507	1,765,367
1909	781,113	1,071,677	1919–20 ..	1,487,872	2,688,371
1910	740,567	1,080,133	1920–21 ..	2,027,133	3,560,648
1911	858,783	1,238,446	1921–22 ..	2,178,101	3,152,604
1912	1,008,259	1,431,985	1922–23 ..	1,988,890	2,887,399
1913	1,018,595	1,458,702	1923–24 ..	1,672,160	2,614,948
1914 (1st six mths.)	533,288	771,581	1924–25 ..	1,485,957	2,714,562
1914–15 ..	829,875	1,587,757	1925–26 ..	1,331,789	2,773,422
1915–16 ..	719,510	1,544,872	1926–27 ..	1,421,927	2,781,312

§ 10. Exports according to Industries.

1. **Classification.**—The following table gives an analysis of the exports of Australian produce according to the main classes of industry in which the goods were produced. In certain cases in which the produce has been subjected to some initial process of manufacture, opinions may differ in regard to its classification, but in preparing the tabulation the method adopted generally has been to credit to the primary industry those products in which the value of the primary element is appreciably the greater. Thus, such commodities as flour, jams and preserved fruits, chaff and prepared fodders, etc., have been treated as the produce of agriculture; butter, cheese, preserved milk, and bacon and hams have been credited to the dairying industry; canned meats, tallow and fellmongered skins have been credited to the pastoral industry, but leather has been classed as a product of manufacturing; minerals and metals which have been smelted or otherwise refined, but not further manufactured, have been included as the produce of mining; and sawn timber as the produce of forestry.

Increasing manufacturing activity in close proximity to the centres of primary production—in some instances by co-operative association of primary producers—has the effect of merging more closely the direct interests of primary and secondary production. Prominent cases of the kind referred to are the production of butter, preserved and dried milk, bacon and hams, canned and dehydrated fruit, jam, sugar, flax fibre, etc. As, therefore, no sharp distinction can be made in such cases between the primary and secondary industries, it follows that the values allocated to these divisions in the table must be taken as a general indication only of their relative importance in the export returns. While there is in the primary products some value due to factory processes, there is, on the other hand, in the manufactured products a considerable element of Australian primary produce in the raw materials from which these manufactured products were made. As the figures given are, however, on the same basis throughout the period covered by the table, they indicate, with reasonable accuracy, the variations in the relative importance of the several industrial groups.

EXPORTS OF AUSTRALIAN PRODUCE ACCORDING TO INDUSTRIAL ORIGIN.

VALUE OF EXPORTS AS RECORDED.

Industrial Group.	1913.(a)		1925–26.		1926–27.	
	£		£		£	
Agriculture	10,677,734	100	33,982,731	318	33,155,560	311
Pastoral	42,057,346	100	80,825,753	192	75,390,086	179
Dairy and Farmyard ..	3,854,734	100	9,096,146	236	7,118,382	185
Mines and Quarries ..	14,712,242	100	15,310,380	104	20,068,172	136
Fisheries	424,849	100	480,923	113	433,245	102
Forestry	1,106,549	100	1,634,643	148	1,713,938	155
Total Primary Produce ..	72,833,454	100	141,330,576	194	137,879,383	189
Manufacturing	2,304,693	100	4,164,498	181	4,026,491	175
Total	75,138,147	100	145,495,074	194	141,905,874	189

(a) Base year.

2. **Effect of Price Changes.**—If the effect of price changes be eliminated from the above figures by the application of the export price index-numbers, the relative quantitative results will be approximately as follows :—

EXPORTS OF AUSTRALIAN PRODUCE.—ELIMINATION OF PRICE CHANGES.

Industrial Group.	1913. (a)		1925–26.		1926–27.	
	£		£		£	
Agriculture	10,677,734	100	20,179,769	189	21,642,010	203
Pastoral	42,057,346	100	46,747,110	111	44,321,038	105
Dairy and Farmyard ..	3,854,734	100	5,952,975	154	4,686,229	122
Mines and Quarries ..	14,712,242	100	10,736,592	73	15,544,672	106
Fisheries	424,849	100	557,915	131	510,300	120
Forestry	1,106,549	100	951,480	86	1,026,310	93
Total Primary Produce ..	72,833,454	100	85,125,841	117	87,730,559	120
Manufacturing	2,304,693	100	2,242,595	97	2,169,446	94
Total	75,138,147	100	87,368,436	116	89,900,005	120

(a) Base year.

3. **Relative Importance of Industrial Groups.**—In the first of the two preceding tables the value of commodities in each industrial group of exports of Australian produce is that recorded at date of shipment from Australia, while in the second table the effect of price changes during the period has been taken into account. In the table showing exports according to recorded value the pastoral group was responsible for the highest proportion of exports during each year. In 1913 the value of commodities included in this group represented 55.97 per cent. of the total exports, as compared with 55.55 per cent. during 1925–26, and 53.13 per cent. during 1926–27. Wool constitutes the greater part of the exports in the pastoral group.

The value of minerals, etc., included in the mining group exceeded the value of items in the agricultural group during the year 1913, but, during the two later years the value of agricultural produce exported was in excess of mineral exports. According to value, the agricultural group now ranks next to the pastoral group. Wheat and flour are the two items of export mainly responsible for this position. The percentage of the agricultural group on the total exports during both 1925–26 and 1926–27 was 23.36. The increase in the total for mines and quarries in 1926–27 is solely due to the heavy exports of gold specie.

The value of exports of dairy and farmyard produce declined considerably during 1925–26 and 1926–27, the downward trend being due to the decline in the exports of butter. Exports included in the fisheries, forestry, and manufacturing groups have not varied to a marked extent.

The recorded value of exports for all industrial groups shows an increase of 94 per cent. during 1925–26 and 89 per cent. during 1926–27, as compared with the total value of exports during the year 1913. The effect of eliminating price changes during the period is shown in the second table. Higher prices of commodities in 1925–26 and 1926–27 tended to inflate the value of exports during these years. On the basis of prices ruling in 1913 the exports of 1925–26 and 1926–27 were greater than those of 1913, the increases for the respective years being 16 per cent. and 20 per cent. The effect of eliminating price changes is particularly noticeable in the figures for the agricultural, pastoral, dairy produce, and manufacturing groups.

4. Australian Production and Exports according to Industry.—The following table shows the total value of Australian Production and Australian Exports during the period of ten years, 1917–18 to 1926–27, classified according to industries; the proportion of each industrial group to total production and to total exports · and in the last column the percentage exported of the production of each industrial group :—

VALUE OF AUSTRALIAN PRODUCTION AND EXPORTS, ACCORDING TO INDUSTRY, 1917–18 TO 1926–27.

Industrial Group.	Value of Production during Ten Years.	Percentage on Total Production.	Value of Exports during Ten Years.	Percentage on Total Exports.	Percentage Exported of the Production in each Industrial Group.
Agriculture	845,644	22.49	307,947	24.51	36.42
Pastoral	1,024,011	27.23	653,827	52.05	63.85
Dairy and Farmyard ..	425,909	11.33	86,176	6.86	20.23
Mining	226,825	6.03	134,873	10.74	59.46
Forestry and Fisheries ..	105,283	2.80	17,012	1.35	16.16
Total Primary Produce ..	2,627,672	69.88	1,199,835	95.51	45.66
Manufacturing	1,132,826	30.12	56,385	4.49	4.98
Total	3,760,498	100.00	1,256,220	100.00	33.40

The figures relating to value of production and value of exports are subject to the qualifications mentioned in 1 *ante*. A period of ten years is embraced, and the values of production and of exports therein give a very fair index of the relative importance of the several industrial groups. Of the total production 69.9 per cent. was classified as primary produce and 30.1 per cent. as manufactured articles. The main contributing groups in the primary produce section were pastoral with 27.2 per cent., and agriculture with 22.5 per cent. of the total production.

Exports of primary produce represented 95.5 per cent of the total exports. The pastoral group, with 52.1 per cent. of the total, shows the highest percentage, followed by the agricultural and mining groups with 24.5 per cent. and 10.7 per cent. respectively. Exports of goods classified in the manufacturing group represented only 4.5 per cent. of the total.

The figures in the last column of the table are of special interest, as they show the percentage exported of the production of each industrial group. Of the total primary production during the period 45.7 per cent. was exported. Over one-third of the agricultural production and approximately two-thirds of the pastoral production were sent abroad.

Fifty-nine per cent. of the total production of the mining industry and 20 per cent. of the produce included in the dairy and farmyard group were exported.

The percentage of manufactured goods exported was comparatively small, only 5 per cent. of the production during the period being sent abroad.

§ 11. Movement of Specie and Bullion.

1. **Imports and Exports.**—The following tables show the value of gold and silver, specie and bullion, and of bronze specie imported and exported during the years 1922–23 to 1926–27:—

AUSTRALIAN IMPORTS AND EXPORTS, SPECIE AND BULLION, 1922–23 TO 1926–27.

Items.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
			IMPORTS.		
	£	£	£	£	£
Gold—Specie ..	7	..	2,585,875	65,790	81,278
Bullion ..	3,501	5,157	7,920,458	292,672	487,242
Total	3,508	5,157	10,506,333	358,462	568,520
Silver—Specie ..	24,300	55,172	33,546	58,833	16,578
Bullion ..	2,130	1,425	2,866	3,414	3,667
Total	26,430	56,597	36,412	62,247	20,245
Bronze—Specie ..	886	38	62	44	70
GRAND TOTAL ..	30,824	61,792	10,542,807	420,753	588,835
			EXPORTS.		
	£	£	£	£	£
Gold—Specie ..	2,219,998	2,411,512	784,944	4,006,382	10,763,242
Bullion ..	5,907	385,755	157,233	345,707	609,167
Total	2,225,905	2,797,267	942,177	4,352,089	11,372,409
Silver—Specie ..	5,870	17,355	16,033	63,966	19,760
Bullion ..	1,069,159	997,874	1,084,825	1,073,356	911,107
Total	1,075,029	1,015,229	1,100,858	1,137,322	930,867
Bronze—Specie ..	5	..	..	8	30
Total—					
Australian Produce	3,300,339	3,812,219	2,039,735	5,435,724	12,297,106
Other Produce ..	600	277	3,300	53,695	6,200
GRAND TOTAL ..	3,300,939(*a*)	3,812,496(*a*)	2,043,035(*a*)	5,489,419	12,303,306

(*a*) Includes premium on gold exported.

2. Imports and Exports by Countries.—The next table shows the imports and exports of specie and bullion from and to various countries during the year 1926–27.

AUSTRALIAN IMPORTS AND EXPORTS—SPECIE AND BULLION BY COUNTRIES, 1926–27.

Country.	Imports.			Exports.		
	Specie.	Bullion.	Total.	Specie.	Bullion.	Total.
	£	£	£	£	£	£
Australia (*a*) ..	11,480	..	11,480	..	..	..
United Kingdom ..	3,330	5,680	9,010	2,676	3,544	6,220
India and Ceylon	..	..	..	743,500	1,514,971	2,258,471
Malaya (British)	..	16	16	13,000	..	13,000
New Zealand ..	74,093	330,232	404,325	..	235	235
Pacific Islands—						
Fiji	..	..	..	1,542	929	2,471
Gilbert and Ellice Islands Colony ..	..	..	..	420	..	420
Samoa	..	..	..	..	5	5
Solomon Islands ..	..	..	..	3,600	..	3,600
Territory of New Guinea	1,595	133,561	135,156	6,180	..	6,180
Papua ..	7,420	21,125	28,545	1,000	..	1,000
Total British Countries ..	97,918	490,614	588,532	771,918	1,519,684	2,291,602
France	40	..	40	..	..	..
Germany	1	..	1	..	..	..
Netherlands East Indies	..	..	..	3,414	..	3,414
Pacific Islands: New Hebrides ..	..	..	..	7,700	..	7,700
United States of America ..	7	255	262	10,000,000	590	10,000,590
Total Foreign Countries ..	48	255	303	10,011,114	590	10,011,704
GRAND TOTAL..	97,966	490,869	588,835	10,783,032	1,520,274	12,303,306

(*a*) Australian produce re-imported.

§ 12. Effect of Prices on Value of Exports.

1. General.—In comparing the value of exports from, and of imports into, any country for a series of years, the question naturally arises as to the extent to which any variation in the aggregate value is due to fluctuations in prices, or to increase or decrease of actual quantities, for, in aggregates expressed in value—the only possible method when the commodities differ—the two sources of variation are confused.

2. Methods of Computation.—The method of computation adopted consists in the taking of an annual average for an extended period of the quantities of all such articles of export as are recorded by quantity, and the application to the average quantities so obtained of the average prices in each year. The quantities used to produce the following results are the averages for 19½ years, viz., from 1st January, 1897, to 30th June, 1916, these being taken as representing the general quantitative composition or norm of the exports from Australia. The results published in issues of the Official Year Book prior to No. 12 were ascertained by applying to the quantities exported during each year the average price per unit ruling in some year arbitrarily taken as the basic year. The advantage of the method now adopted is that the results are comparable throughout, whereas under the method previously followed each year was comparable with the basic year only.

3. Effect on Export Values.—The following table shows the value of total exports (Australian and other produce) as actually recorded in each year specified, together with the value computed on the assumption that the prices of 1901 were maintained. The table also shows the yearly " price levels " based upon the results so ascertained, and furnishes a measure of the influence of prices on the value of exports in each year since 1901. Column IV.—values computed on 1901 prices—represents the volume of exports (less specie and gold bullion), expressed in the common denomination of value, and the figures therein show that, had the prices of 1901 remained constant, the value of the exports of merchandise during the year 1926–27, for example, would have been £64,184,127 only, instead of £133,502,984—the value actually recorded. The difference between these amounts (£69,318,857) results from a rise of 108 per cent. (*i.e.* from 1,000 to 2,080) in the prices of commodities for the period intervening between 1901 and 1926–27.

The column " Price levels " shows that prices as indicated by the exports rose from the beginning of the decade to the year 1906. Owing to the large proportion of the aggregate value of exports represented by wool and wheat, any change in the price of these commodities has a marked effect on the index-numbers for the total group of exports, and it is to their influence that the fall of prices in 1911 is mainly due. From that year to 1920–21 prices steadily increased, but there was a considerable decline during 1921–22. An upward trend was manifested during 1922–23, and the price level for that year for all groups of exports was 2,039 as compared with 1,721 for 1921–22. The high prices realized for wool during 1923–24 and 1924–25 were responsible for the exceptional increase in the price-levels of the pastoral group for those years, the index-number for the last year reaching a level greatly in excess of any previous year. The price level for all groups of commodities rose sharply to 2,476 during 1923–24 and to 2,803 in 1924–25. Prices were on a lower level in 1925–26 and 1926–27, and the price-level for the combined group of commodities in the latter year declined to 2,080. Every group, with the exception of miscellaneous produce, showed decreases compared with the previous year. The lower price ruling for wool was mainly responsible for the fall in the price-level of the pastoral group. The slightly higher prices obtained for butter and cheese caused the increase in the price-level for the dairy produce group.

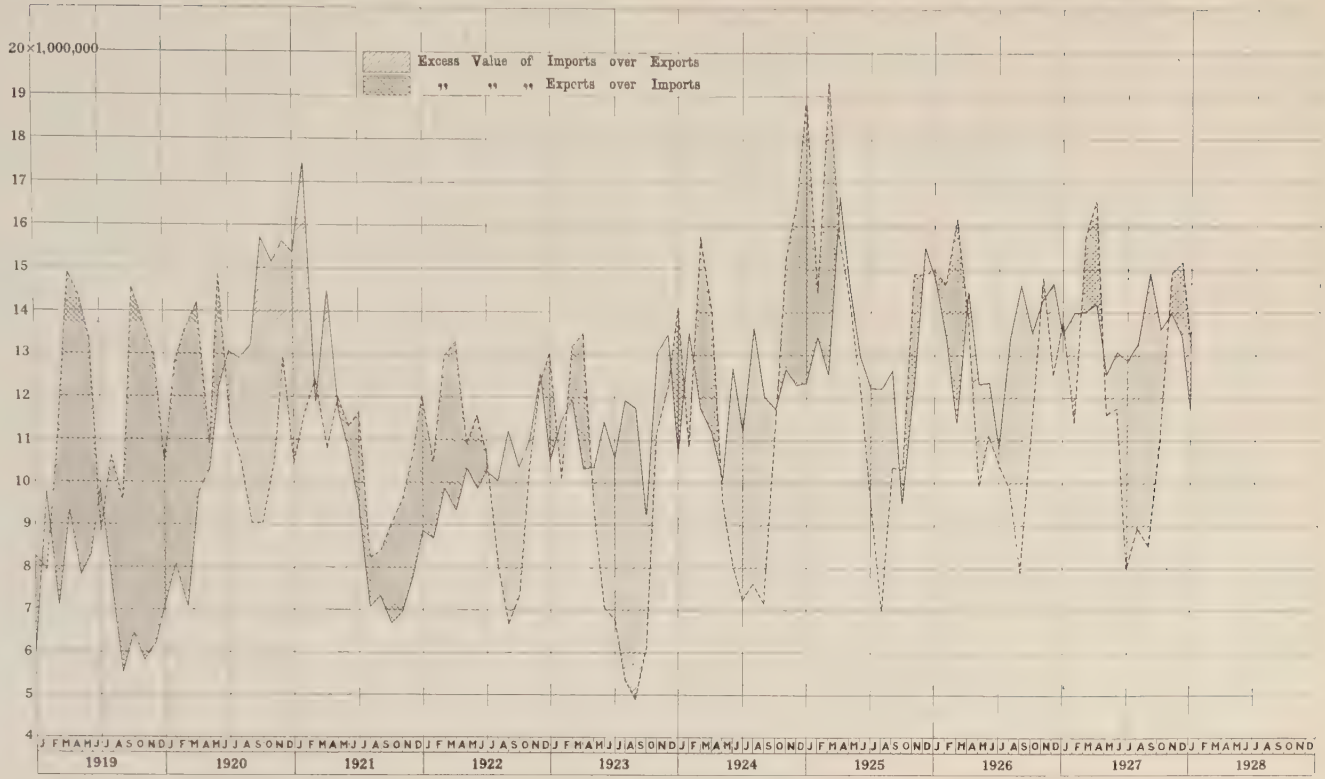
AUSTRALIAN EXPORTS.—VALUES AND PRICE LEVELS, 1901, 1906, AND 1911 TO 1926–27.

Year.	Exports of Specie and Gold Bullion.	Other Exports.		Total Exports (including Specie and Gold Bullion).		Price-Levels. (*a*) Year 1901 = 1,000
		Values as Recorded.	Values Computed on Mass Prices of 1901.	Values as Recorded.	Values Computed on Mass Prices of 1901.	
I.	II.	III.	IV.	V.	VI.	VII.
	£	£	£	£	£	
1901 ..	14,347,776	35,348,396	35,348,396	49,696,172	49,696,172	1000
1906 ..	16,895,059	52,842,704	42,005,330	69,737,763	58,900,389	1258
1911 ..	11,561,639	67,920,619	58,501,825	79,482,258	70,063,464	1161
1912 ..	11,881,216	67,214,874	53,218,427	79,096,090	65,099,643	1263
1913 ..	3,164,105	75,407,664	58,455,553	78,571,769	61,619,658	1290
1914–15 ..	2,474,197	58,118,379	44,740,861	60,592,576	47,215,058	1299
1915–16 ..	10,391,019	64,387,302	40,469,705	74,778,321	50,860,724	1591
1916–17 ..	11,521,815	86,433,667	43,985,398	97,955,482	55,507,213	1965
1917–18 ..	6,483,265	74,945,956	35,962,551	81,429,221	42,445,816	2084
1918–19 ..	7,252,202	106,711,774	52,489,805	113,963,976	59,742,007	2033
1919–20 ..	5,654,909*b*	144,168,600	64,103,424	149,823,509	68,516,379	2249
1920–21 ..	5,371,421*b*	126,787,491	56,249,996	132,158,912	60,330,722	2254
1921–22 ..	3,487,615*b*	124,358,920	72,259,686	127,846,535	75,225,164	1721
1922–23 ..	2,231,780*b*	115,638,367	56,713,275	117,870,147	58,818,605	2039
1923–24 ..	2,814,622*b*	116,672,542	47,121,382	119,487,164	49,742,586	2476
1924–25 ..	958,210*b*	161,071,949	57,464,127	162,030,159	58,373,048	2803
1925–26 ..	4,416,063	144,146,146	66,982,410	148,562,209	71,398,473	2152
1926–27 ..	11,392,199	133,502,984	64,184,127	144,895,183	75,576,326	2080

(*a*) These are index-numbers for the total group of exports, excluding specie and gold bullion.

(*b*) Including premium on gold exported 1919–20, £1,241,954, or 28.8 per cent. on standard price; 1920–21, £1,290,695, or 32.1 per cent.; 1921–22, £522,137, or 17.6 per cent.; 1922–23, £126,450, or 6.04 per cent.; 1923–24, £193,418, or 8.72 per cent.; 1924–25, £49,289, or 6.7 per cent.

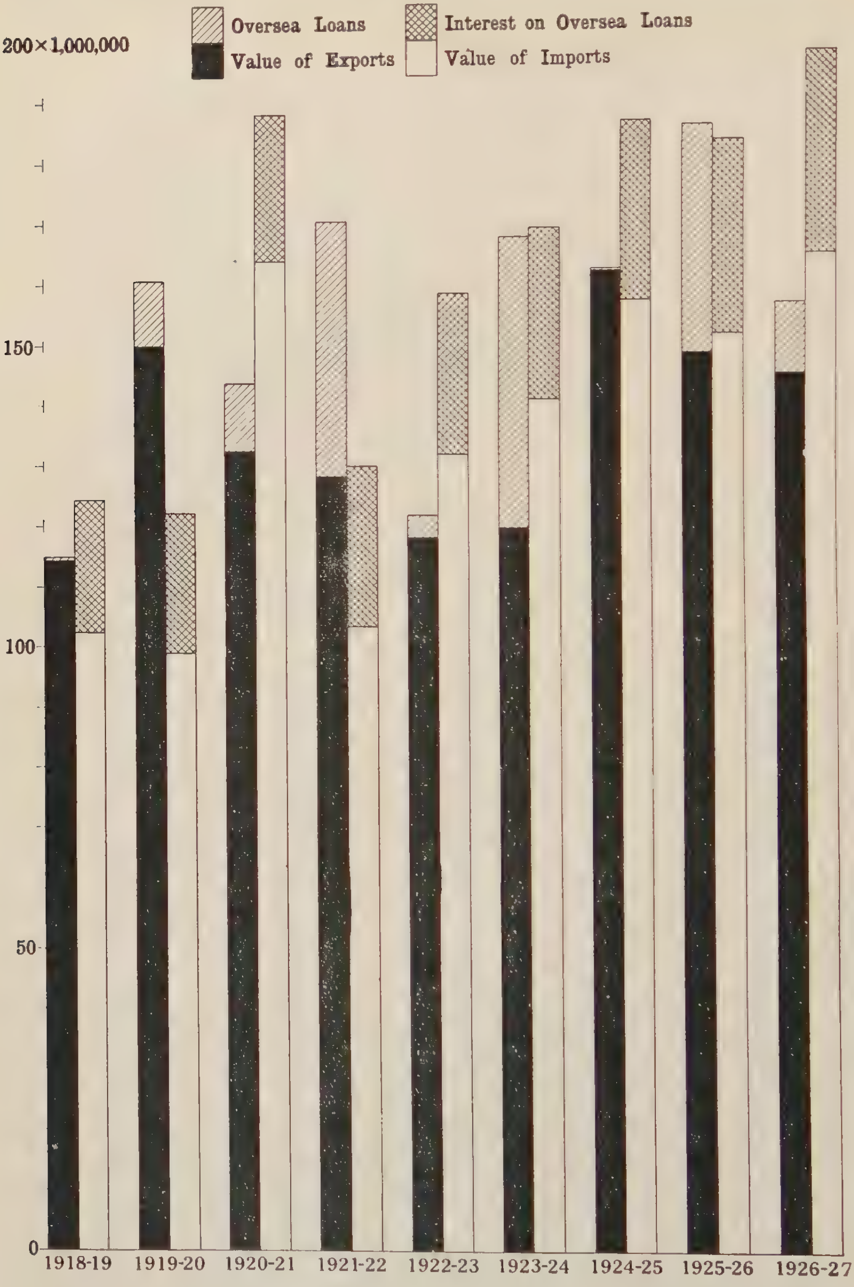
VALUE OF MONTHLY IMPORTS AND EXPORTS—AUSTRALIA, 1919 TO 1927.



EXPLANATION.—The base of the graph has been divided into months, but the vertical lines are drawn for each six months only.

The vertical height represents £1,000,000 in the case of both Imports and Exports. The values of Imports and Exports are shown for each month, Imports being indicated by a continuous line and Exports by a dotted one. The areas in single shading represent an excess of Imports over Exports, and the cross shading an excess of Exports over Imports.

VALUE OF IMPORTS AND EXPORTS, AMOUNT OF LOANS RAISED OVERSEA, AND INTEREST PAYABLE OVERSEA—AUSTRALIA, 1918-19 TO 1926-27.



EXPLANATION.—Each vertical division of the scale represents £10,000,000. The key to the shading is given above on the graph.

Two columns are given for each year, one made up of the value of Exports and the amount of new loans raised oversea (i.e., the increase in net indebtedness); the other column consisting of the value of Imports, and the Interest on all oversea loans including services.

The first column represents items which make credit available abroad for the payments indicated in the second column. (See § 4. 2, page 204.)

4. Price-Levels of Exports.—The following table of index-numbers shows the variations in price of the different classes of goods exported, grouped according to industrial origin :—

AUSTRALIAN EXPORTS.—PRICE-LEVELS, 1901, 1906, AND 1911 TO 1926–27.

Year.	Agricultural Produce.	Pastoral Produce.	Dairy Produce.	Mineral Produce.(*a*)	Miscellaneous.	All Classes.(*a*)
1901	1,000	1,000	1,000	1,000	1,000	1,000
1906	1,155	1,344	1,021	1,113	991	1,258
1911	1,243	1,193	1,085	944	1,227	1,161
1912	1,388	1,268	1,198	1,133	1,254	1,263
1913	1,324	1,334	1,124	1,114	1,329	1,290
1914–15 ..	1,480	1,323	1,176	1,066	1,221	1,299
1915–16 ..	1,927	1,589	1,488	1,393	1,106	1,591
1916–17 ..	1,726	2,131	1,690	1,650	1,357	1,965
1917–18 ..	1,954	2,250	1,624	1,760	1,401	2,084
1918–19 ..	1,864	2,166	1,855	1,692	1,775	2,033
1919–20 ..	2,145	2,393	2,023	1,787	2,150	2,249
1920–21 ..	3,177	2,093	2,854	1,813	2,179	2,254
1921–22 ..	2,108	1,717	1,507	1,427	1,845	1,721
1922–23 ..	1,931	2,213	1,845	1,459	1,701	2,039
1923–24 ..	1,700	2,930	1,785	1,529	1,803	2,476
1924–25 ..	2,304	3,303	1,654	1,600	1,942	2,803
1925–26 ..	2,230	2,306	1,717	1,589	1,859	2,152
1926–27 ..	2,028	2,269	1,707	1,438	1,861	2,080

(*a*) Excluding gold.

§ 13. External Trade of Australia and other Countries.

1. Essentials of Comparisons.—Direct comparisons of the external trade of any two countries are possible only when the general conditions prevailing therein, and the system of record, are more or less identical. For example, in regard to the mere matter of record. it may be observed that in one country the value of imports may be the value at the port of shipment, while in another the cost of freight, insurance, and charges may be added thereto. Again, the values of imports and exports in the one may be declared by merchants, whereas in the other they may be the official prices fixed from time to time by a commission constituted for the purpose. In later years, moreover, a very substantial difference in the value of imports would arise from the different methods of converting the moneys of foreign countries, *i.e.*, from the application of current rates of exchange or of the mint par. Lastly, the figures relating to the external trade of any country are also affected in varying degree by the extent to which they include transit or re-export trade. Including bullion and specie, the transit trade of Belgium, for example, represented, prior to the war, approximately 40 per cent. of the gross trade recorded ; of Switzerland, 45 per cent. ; of France, 20 per cent. ; and of the United Kingdom, 15 per cent. ; whereas in Australia the same element represents, normally, about 4 per cent., and in New Zealand even less.

2. "Special Trade" of Various Countries.—Special trade may be defined according to the interpretation of the British Board of Trade, as (*a*) imports entered for consumption in the country (as distinguished from imports for transhipment or re-export) and (*b*) exports of domestic products.

In the following table the figures relate as nearly as possible to imports entered for consumption in the various countries specified, and to exports of their domestic products. It is to be noted, however, that these figures do not invariably denote the same thing throughout, since, in the United Kingdom and other manufacturing countries, raw or partly manufactured materials are imported as for home consumption, and, after undergoing some process of manufacture or further modification, are re-exported as domestic production. Further, the statistical records of many countries do not distinguish between bullion and specie imported for the use of the particular country (home consumption) and the amount in transit, nor between the exports of that produced within the country and that re-exported. Nevertheless, a comparison of this character reveals approximately the extent of the external trade which otherwise would not be manifest. The figures relating to foreign countries have been extracted from the League of Nations Memorandum on International Trade and Balance of Payments.

IMPORTS FOR HOME CONSUMPTION, AND EXPORTS OF DOMESTIC PRODUCTS —INCLUDING BULLION AND SPECIE, VARIOUS COUNTRIES.

Country.	Year.	Trade.			Trade per Inhabitant.								
		Imports.	Exports.	Total.	Imports.			Exports.			Total.		
		£1,000	£1,000	£1,000	£	s.	d.	£	s.	d.	£	s.	d.
C'wealth of Australia	1926–27	164,717	144,895	309,612	26	19	1	23	14	3	50	13	4
	1913	76,323	75,113	151,436	15	17	11	15	12	10	31	10	9
United Kingdom (*a*)	1926	1,117,298	651,893	1,769,191	24	14	2	14	8	4	39	2	6
	1913	671,265	525,461	1,196,726	14	11	8	11	8	4	26	0	0
Canada	1926	212,140	261,317	473,457	22	11	4	27	16	0	50	7	4
	1913	127,366	88,889	216,255	17	3	9	11	19	11	29	3	8
New Zealand ..	1926	48,953	44,339	93,292	35	4	2	31	17	10	67	2	0
	1913	21,879	22,578	44,457	20	10	7	21	3	8	41	14	3
Union of South Africa	1926	69,753	82,305	152,058	8	7	1	9	17	2	18	4	3
	1913	41,152	65,226	106,378	6	0	2	9	10	6	15	10	8
United States of America	1926	908,025	969,547	1,877,572	7	13	10	8	4	3	15	18	1
	1913	365,226	503,704	868,930	3	14	7	5	2	10	8	17	5
Argentine Republic..	1926	156,173	150,617	306,790	15	9	8	14	18	8	30	8	4
	1913	98,560	103,086	201,646	12	6	9	12	18	1	25	4	10
Belgium	1926	153,909	130,247	284,156	19	0	9	16	2	6	35	3	3
	1913	184,156	144,445	328,601	24	2	3	18	18	3	43	0	6
Denmark	1926	81,482	75,720	157,202	23	16	6	22	2	10	45	19	4
	1913	42,798	35,185	77,983	15	2	5	12	8	8	27	11	1
France	1926	397,737	397,942	795,679	9	11	6	9	11	7	19	3	1
	1913	334,362	273,251	607,613	8	8	0	6	17	3	15	5	3
Germany	1926	487,243	480,658	967,901	7	15	9	7	13	8	15	9	5
	1913	527,366	494,445	1,021,811	7	16	11	7	7	1	15	4	0
Italy	1926	207,201	149,589	356,790	5	2	2	3	13	9	8	15	11
	1913	144,856	99,794	244,650	4	1	4	2	16	1	6	17	5
Japan	1926	223,457	191,152	414,609	3	14	7	3	3	10	6	18	5
	1913	74,691	64,815	139,506	1	7	1	1	3	6	2	10	7
Norway	1926	49,588	36,626	86,214	17	19	0	13	5	1	31	4	1
	1913	29,835	20,988	50,823	12	2	2	8	10	5	20	12	7
Spain	1926	85,391	63,786	149,177	3	17	3	2	17	8	6	14	11
	1913	51,852	41,975	93,827	2	11	1	2	1	4	4	12	5
Sweden	1926	82,099	78,189	160,288	13	11	3	12	18	3	26	9	6
	1913	46,708	45,062	91,770	8	5	8	7	19	10	16	5	6
Switzerland .	1926	93,827	72,634	166,461	23	15	4	18	7	11	42	3	3
	1913	73,868	54,527	128,395	19	2	4	14	2	3	33	4	7

(*a*) Excluding Bullion and Specie.

§ 14. Trade of the United Kingdom with Australia compared with that of Competing Countries.

1. **Proportion of Trade from United Kingdom and Competing Countries.**—The failure of the United Kingdom to maintain the position formerly held in the import trade of Australia has been a matter of more than ordinary interest for some years. Since 1908 a permanent resident Commissioner appointed by the British Board of Trade has been established in Australia for the purpose of advising manufacturers and merchants in the United Kingdom with regard to Australian trade affairs. From the 8th August, 1907, the Commonwealth Customs Tariffs have provided special rates in favour of goods from the United Kingdom with the object of assisting the British manufacturer to retain or improve his position in this market.

In an investigation into the relative position, as compared with other countries, occupied by the United Kingdom in the import trade of Australia, the comparison must, of course, be restricted to those classes of goods which are produced or manufactured in the United Kingdom. The imports to Australia include many commodities, such as tea, rice, raw coffee, unmanufactured tobacco, petroleum products, copra, timber, etc., which the United Kingdom could not supply. These items, in addition to others not available from that country, have, therefore, been omitted from the computation hereunder.

The imports into Australia have been classified under nine headings, and the trade of the United Kingdom therein is compared with that of France, Germany, Japan, and the United States. These countries have been selected as the principal competitors with the United Kingdom for the trade of Australia under the specified headings.

AUSTRALIAN IMPORTS.—PRODUCTS OF VARIOUS COUNTRIES, 1913 AND 1923–24 TO 1926–27.

Nature of Imports.	Year.	United Kingdom.	France.	Germany.	Japan.	U.S. of America.	All Countries.
		£	£	£	£	£	£
Foodstuffs of animal origin	1913 ..	301,025	3,093	12,071	6,988	289,229	947,697
	1923–24	453,861	3,364	274	9,872	306,164	2,204,883
	1924–25	467,833	3,564	870	16,615	387,610	1,978,092
	1925–26	470,491	4,606	1,408	35,294	564,388	2,473,756
	1926–27	519,771	5,423	3,289	63,233	653,399	3,099,388
Spirituous and alcoholic liquors	1913 ..	1,227,561	343,394	143,426	1,689	2,805	1,947,248
	1923–24	1,752,607	222,626	1,712	10	2,778	2,102,219
	1924–25	1,791,001	206,955	9,667	13	391	2,177,281
	1925–26	1,940,827	192,123	8,997	20	66	2,297,738
	1926–27	1,444,151	205,596	8,584	16	3	1,815,608
Apparel, textiles, and manufactured fibres	1913 ..	12,254,561	961,025	1,712,395	475,973	623,542	19,935,750
	1923–24	24,979,055	2,310,817	271,909	2,657,125	2,011,387	38,482,446
	1924–25	26,782,623	2,345,401	561,080	3,225,081	1,605,269	42,372,272
	1925–26	23,386,529	2,016,927	678,253	3,358,478	2,135,120	39,055,392
	1926–27	23,507,668	2,819,357	1,214,844	4,022,647	2,507,897	42,416,966
Metals, metal manufactures and machinery	1913 ..	13,905,483	217,148	2,380,152	7,657	3,817,705	21,670,212
	1923–24	22,347,802	484,638	319,497	57,107	15,991,224	43,751,850
	1924–25	24,627,221	543,988	431,986	30,394	16,140,794	45,594,102
	1925–26	24,087,735	416,369	713,815	32,787	16,675,170	45,498,784
	1926–27	25,543,644	442,932	1,259,743	27,762	20,171,028	51,282,063
Paper and stationery	1913 ..	1,789,577	21,930	266,483	10,656	403,679	3,134,750
	1923–24	4,064,670	171,957	47,440	19,772	677,986	6,443,226
	1924–25	4,692,738	119,671	93,273	15,098	630,344	6,845,778
	1925–26	4,909,573	124,620	130,789	20,127	680,315	7,126,461
	1926–27	5,035,992	161,928	197,501	20,010	714,200	7,936,028
Jewellery, time-pieces, and fancy goods	1913 ..	521,290	88,070	263,688	19,307	138,217	1,442,292
	1923–24	959,693	155,293	134,257	102,149	314,763	2,477,695
	1924–25	1,002,094	151,159	281,642	91,037	247,056	2,648,680
	1925–26	944,715	123,911	364,426	111,415	248,173	2,746,403
	1926–27	913,971	115,002	393,943	114,259	309,317	2,849,587
Earthenware, cements, glass, etc.	1913 ..	650,138	40,245	453,188	21,493	62,887	1,565,727
	1923–24	1,462,533	17,438	32,092	181,736	219,969	2,441,288
	1924–25	1,529,768	32,334	73,824	147,195	193,359	2,529,697
	1925–26	1,423,191	21,997	107,953	156,026	210,396	2,455,818
	1926–27	1,522,386	43,534	147,281	155,286	221,180	2,610,647
Drugs, chemicals, and fertilizers	1913 ..	1,020,647	245,426	304,179	139,178	210,758	2,721,902
	1923–24	1,875,757	220,889	88,735	43,495	574,636	3,878,526
	1924–25	1,873,447	231,085	117,507	40,211	614,023	4,120,460
	1925–26	1,907,766	254,448	135,748	52,690	778,239	4,316,482
	1926–27	2,092,824	289,227	231,468	47,662	1,000,132	5,027,180
Rubber and leather and manufactures thereof and substitutes therefor	1913 ..	485,216	68,686	347,045	688	433,837	1,717,035
	1923–24	692,595	147,826	13,731	2,272	1,592,065	3,497,331
	1924–25	800,003	185,339	26,260	1,467	1,449,439	3,384,280
	1925–26	1,071,315	199,167	57,649	4,276	1,782,214	5,727,019
	1926–27	1,126,592	212,953	78,178	7,949	1,383,284	5,593,757
Total above-mentioned imports	1913 ..	32,155,498	1,989,017	5,882,627	683,629	5,982,659	55,082,613
	1923–24	58,588,573	3,734,848	909,647	3,073,538	21,690,972	105,279,514
	1924–25	63,566,728	3,819,496	1,596,109	3,567,111	21,268,285	111,650,632
	1925–26	60,142,142	3,354,168	2,199,038	3,771,113	23,074,081	111,697,853
	1926–27	61,706,999	4,295,952	3,534,831	4,458,824	26,960,440	122,631,224
Total imports (less bullion and specie)	1913 ..	40,948,803	2,222,631	7,029,325	950,300	10,907,512	78,196,109
	1923–24	63,599,700	4,101,137	1,368,894	3,557,834	34,556,516	140,556,501
	1924–25	69,041,054	4,216,457	2,259,691	4,146,234	33,100,262	146,600,489
	1925–26	65,824,179	3,758,529	2,821,789	4,372,083	37,233,485	151,217,425
	1926–27	67,786,167	4,767,123	4,359,513	5,183,470	41,394,015	164,127,759

AUSTRALIAN IMPORTS.—PRODUCTS OF VARIOUS COUNTRIES.—PERCENTAGES. 1913 AND 1923–24 TO 1926–27.

Nature of Imports.	Year.	United Kingdom.	France.	Germany.	Japan.	U.S. of America.	All Countries.
Foodstuffs of animal origin	1913 ..	31.77	0.33	12.74	0.74	30.52	100
	1923–24	20.58	0.15	0.01	0.45	13.89	100
	1924–25	23.65	0.18	0.04	0.84	19.60	100
	1925–26	19.02	0·19	0.06	1.43	22.82	100
	1926–27	16.77	0.17	0.11	2.04	21.08	100
Spirituous and alcoholic liquors	1913 ..	63.04	17.64	7.37	0.09	0.14	100
	1923–24	83.37	10.59	0.08	0.00	0.13	100
	1924–25	82.26	9.51	0.44	0.00	0.02	100
	1925–26	84.47	8.36	0.39	0.00	0.00	100
	1926–27	79.55	11.32	0.47	0.00	0.00	100
Apparel, textiles, and manufactured fibres	1913 ..	61.48	4.82	8.59	2.39	3.13	100
	1923–24	64.91	6.00	0.71	6.90	5.23	100
	1924–25	63.20	5.54	1.32	7.61	3.79	100
	1925–26	59.88	5.16	1.74	8.60	5.47	100
	1926–27	55.42	6.65	2.87	9.48	5.91	100
Metals, metal manufactures, and machinery	1913 ..	64.17	1.00	10.98	0.04	17.62	100
	1923–24	51.08	1.11	0.73	0.13	36.55	100
	1924–25	54.01	1.19	0.95	0.07	35.40	100
	1925–26	52.94	0.92	1.57	0.07	36.65	100
	1926–27	49.82	0.86	2.46	0.05	39.33	100
Paper and stationery	1913 ..	57.41	0.70	8.50	0.34	12.88	100
	1923–24	63.08	2.67	0.74	0.31	10.52	100
	1924–25	68.53	1.75	1.36	0.22	9.21	100
	1925–26	68.89	1.75	1.84	0.28	9.55	100
	1926–27	63.46	2.04	2.49	0.25	9.00	100
Jewellery, timepieces, and fancy goods	1913 ..	36.14	6.11	18.28	1.34	9.58	100
	1923–24	38.74	6.27	5.42	4.12	12.70	100
	1924–25	37.83	5.71	10.63	3.44	9.33	100
	1925–26	34.40	4.51	13.26	4.06	9.04	100
	1926–27	32.07	4.04	13.82	4.01	10.86	100
Earthenware, cements, glass, etc.	1913 ..	41.52	2.57	28.94	1.37	4.02	100
	1923–24	59.91	0.71	1.31	7.45	9.01	100
	1924–25	60.47	1.28	2.92	5.82	7.64	100
	1925–26	57.95	0.90	4.40	6.35	8.57	100
	1926–27	58.31	1.67	5.64	5.95	8.47	100
Drugs, chemicals, and fertilizers	1913 ..	37.49	9.02	11.18	5.11	7.74	100
	1923–24	48.36	5.70	2.29	1.12	14.82	100
	1924–25	45.47	5.61	2.85	0.98	14.90	100
	1925–26	44.20	5.89	3.14	1.22	18.03	100
	1926–27	41.63	5.75	4.60	0.95	19.90	100
Rubber and leather and manufactures thereof, and substitutes therefor	1913 ..	28.26	4.00	20.21	0.04	25.27	100
	1923–24	19.80	4.23	0.39	0.06	45.52	100
	1924–25	23.64	5.48	0.78	0.04	42.83	100
	1925–26*a*	18.71	3.48	1.01	0.07	31.12	100
	1926–27*a*	20.14	3.81	1.40	0.14	24.73	100
Total of above-mentioned articles	1913 ..	58.38	3.61	10.68	1.24	10.86	100
	1923–24	55.65	3.55	0.86	2.92	20.60	100
	1924–25	56.93	3.42	1.43	3.20	19.05	100
	1925–26	53.84	3.00	1.97	3.38	20.66	100
	1926–27	50.32	3.50	2.88	3.64	21.99	100
Total imports (less bullion and specie)	1913 ..	52.37	2.84	8.99	1.22	13.95	100
	1923–24	45.25	2.92	0.97	2.53	24.59	100
	1924–25	47.09	2.88	1.54	2.83	22.58	100
	1925–26	43.53	2.49	1.87	2.89	24.62	100
	1926–27	41.30	2.90	2.66	3.16	25.22	100

(*a*) The proportion of crude rubber in this group was unusually large in this year.

The total value of the commodities included in the competitive classes increased from £55,082,613 during 1913 to £122,631,224 during 1926–27. The two classes of goods which bulked largely in these totals were—(*a*) metals, metal manufactures and machinery, and (*b*) apparel, attire, and manufactured fibres. The value of goods included in these two groups represented 76 per cent. of the total value of competitive commodities during 1926–27.

Of the total value of competitive goods the United Kingdom supplied 50.32 per cent. during 1926–27 as against 58.38 per cent. during 1913 and 61.15 per cent. during 1922–23. In seven of the nine competitive groups of imports, the proportion supplied by the United Kingdom decreased during 1926–27 as compared with the previous year. The two groups which showed increased proportions were—earthenware, cements, glass, etc., and rubber and leather, and manufactures thereof. The United Kingdom supplied Australia during 1926–27 with 79.55 per cent. of the total oversea purchases of spirituous and alcoholic liquors; 55.42 per cent. of apparel and attire; 63.46 per cent. of paper and stationery; 58.31 per cent. of earthenware, glassware, etc.; and 49.82 per cent. of metal manufactures and machinery.

The share of Japan in the competitive trade increased from 1.24 per cent. in 1913 to 3.64 per cent. in 1926–27. The classes of goods chiefly imported from Japan are as follows:—Apparel and textiles, metal manufactures and machinery, china and porcelain ware, earthenware, glass and glassware, paper and stationery, brushware, and fancy goods.

The position of the United States in this competitive trade has improved from 10.86 per cent. in 1913 to 21.99 per cent. in 1926–27. In the latest pre-war year (1913), the value of goods from the United States in the "competitive" groups was £5,982,659, whereas in 1926–27 it was £26,960,440. The following are the principal groups of commodities in which United States sales to Australia during 1926-27 were greater than those of 1913:—Apparel and textiles, manufactured metals and machinery (including motor cars, chassis, etc.), rubber and manufactures thereof, and drugs, chemicals, and fertilizers.

The positon of France declined from 3.61 per cent. in 1913 to 3.00 per cent. in 1925–26, but recovered to 3.50 per cent. in 1926–27. The proportion supplied by France has, however, not varied greatly, as the imports during the five years under review have represented rather more than 3 per cent. of the competitive trade. Apparel and textiles are the most important imports from France.

The proportion of the imports supplied by Germany in 1913 was 10.68 per cent. as compared with 58.38 per cent. from the United Kingdom; 3.61 per cent. from France; 1.24 per cent. from Japan; and 10.86 per cent. from the United States. From 1914–15 to 1921–22 imports from Germany were on a very small scale, but have increased rapidly since the latter year. The percentage of the imports for 1926–27 was 2.88 per cent. as compared with 0.86 per cent. in 1923–24. The principal classes of imports from Germany were manufactured metals and machinery, and apparel and textiles.

From the foregoing it will be seen that the more prominent position held by the United States of America and by Japan in the Australian import market during the past three years was not altogether at the expense of the United Kingdom, but represented a substitution of the trade formerly supplied by Germany.

Comparing the percentages of imports from each country during the period 1923–24 to 1926–27 it will be noticed that the proportions supplied by the United States, Japan and Germany increased, while those from France and the United Kingdom decreased.

2. **Preferential Tariffs.**—The Commonwealth Tariff Act of 1908 provided Preferential Tariff rates in favour of goods produced or manufactured in the United Kingdom. Subsequent amendments of the Tariff have extended the list of articles to which the preferential rates apply. This favourable treatment of the United Kingdom was again extended by Customs Tariff 1921 (No. 25 of 1921), and when this Act was incorporated in Customs Tariff 1921–1926 further concessions were granted.

On the introduction of the preferential treatment of British goods by the Commonwealth Tariff, it was required that British material or labour should represent not less than one-fourth the value of such goods. From the 1st September, 1911, it was required in regard to goods only partially manufactured in the United Kingdom, that the final process or processes of manufacture should have been performed in the United Kingdom and that the expenditure on material of British production and/or British labour should have been not less than one-fourth of the factory or works cost of the goods in the finished state. These conditions were superseded during the year 1925.

Important alterations in the conditions governing the entry of goods into the Commonwealth under the British Preferential Tariff were made during 1925. The amended conditions apply in regard to goods which are invoiced to Australia on and after 1st April, 1925.

Under the new conditions Preference is granted in the Commonwealth as follows :—

(*a*) To goods which are wholly produced or wholly manufactured in the United Kingdom.

As to manufactured goods, these will only be considered " wholly manufactured in the United Kingdom " if in the raw materials used and in the finished goods no manufacturing process has been performed outside the United Kingdom which is being commercially performed in the United Kingdom.

The Minister shall determine what are to be regarded as raw materials, and in such determination may include partially manufactured Australian materials.

(*b*) To goods, not wholly produced or wholly manufactured in the United Kingdom in the terms of paragraph (*a*), provided they contain at least 75 per cent. of United Kingdom labour and/or material in their factory or works cost.

(*c*) Notwithstanding anything contained in the preceding paragraphs, to goods of a class or kind not commercially manufactured in Australia provided they contain at least 25 per cent. of United Kingdom labour and/or material in their factory or works cost.

(*d*) It is essential in every case that the final process or processes of manufacture shall take place in the United Kingdom, and that the goods are consigned therefrom direct to Australia.

It is also provided that the conditions of preference set out above shall apply (in addition to goods from the United Kingdom) to goods, claiming preference, shipped from any country to which the Commonwealth of Australia has extended Tariff Preference, whether the rates granted be those of the "British Preferential Tariff," the " Intermediate Tariff," or special rates.

On the basis of the imports during 1913, the preferential provisions of the Tariff of 1908–11 covered 65 per cent. of the imports of merchandise of United Kingdom origin, the margin of preference being equal to 5 per cent. of the value of the goods. On the same basis the Tariff of 1921–26 has extended the application of the Preferential Tariff rates to 95 per cent. of the imports from the United Kingdom, and, at the same time, has increased the margin of preference to 13.5 per cent. *ad valorem*. The average equivalent *ad valorem* rate of duty payable under the Tariff of 1921–1926 on goods of United Kingdom origin is about 31 per cent., whereas the same goods under the General Tariff rates would be called upon to pay an average rate of about 44 per cent.

An application of the Tariff of 1921–26 to the imports from the United Kingdom entered for home consumption during the year 1926–27 shows that the value of the goods of United Kingdom origin which participated in the preferential provisions of the Tariff was £62,712,290, upon which duty to the amount of £10,050,631 was collected. Under the General Tariff the same goods would have been required to pay £18,530,337 duty. Thus, had the conditions of the General Tariff operated on these goods £8,479,706 additional duty would have been paid, representing an average of 13.5 per cent. on the value of the goods.

Of the £62,712,290 worth of goods mentioned above, £29,968,581 were " free," while the same goods if they had been imported from Other Countries would have paid duty to the amount of £3,756,686, representing an average *ad valorem* rate of 12.5 per cent.

The value of goods from countries other than the United Kingdom which were adversely affected by the preferential provisions of the Tariff amounted to £64,489,582, and the duty collected thereon was £18,813,096, or £7,509,766 more than would have been paid under the British Preference Tariff Rates.

3. Reciprocal Tariffs.—(i) *General.* The Tariff Act of 1921 introduced a new feature into Australian Tariffs in the form of an Intermediate Tariff. In submitting the schedule to Parliament, the Minister for Trade and Customs made the following statement of the object of the Intermediate Tariff :—" . . . the Minister is empowered under the Bill to enter into reciprocal arrangements with other Dominions of the British Crown. The Minister will be able, if we can arrange a satisfactory reciprocal agreement, to extend to other Dominions on individual items the British preference rate, or the intermediate rate, or, it may be, the general rate. Such agreements will be subject to the ratification of Parliament. The provision simply means that if any of our sister self-governing Dominions desires to enter into reciprocal trade relationships with us, the Minister, with the British Preference Tariff, the Intermediate Tariff, and the General

Tariff before him, may bargain with the sister Dominion and come to an agreement which, as I say, must subsequently be ratified by Parliament. . . . There is a provision of a somewhat similar character in regard to other countries than the Dominions, the only difference being that the Minister is empowered to extend to countries other than the Dominions only the Intermediate Tariff; that is to say, in entering into such negotiations, he is precluded from offering to those countries what we might term, for the purposes of this Bill, the Empire rate. He is confined in his negotiations with these other countries to the Intermediate Tariff."

(ii) *Union of South Africa.* Until 1922, the Union of South Africa was the only British Dominion with which Australia had a reciprocal Tariff arrangement. The Commonwealth Customs Tariff (South African Preference) Act, No. 17 of 1906 and subsequent amending Acts provided preferential rates of duty to be applied to certain imported goods "when those goods are imported from and are the produce or manufacture of any of the British South African Colonies or Protectorates which are included within the South African Customs Union."

The Customs Tariff (South African Preference) 1906 was repealed by the Customs Tariff, 1926. The repeal came into operation on the 1st July, 1926, at nine o'clock in the forenoon, and thereafter the provisions of the Customs Tariff 1921–1926 applied in relation to goods imported from South Africa which are entered for home consumption after that time.

(iii) *Dominion of New Zealand.* On the 11th April, 1922, an agreement was made between the Commonwealth of Australia and the Dominion of New Zealand whereby goods specified in the schedule attached to the agreement should be admitted at the rates of duty set out in the schedule. In addition to the goods specially mentioned in the schedule, it is provided that "all other goods being the produce or manufacture of Australia or New Zealand shall be dutiable at the rates applicable to goods being the produce or manufacture of the United Kingdom, upon entry into New Zealand or Australia respectively." This agreement was ratified by the Commonwealth Parliament by the Customs Tariff (New Zealand Preference) 1922, and, by Proclamation dated 24th August, 1922, came into operation on the 1st September, 1922. A variation of the original agreement was ratified by the Customs Tariff (New Zealand Preference) No. 38 of 1926. In section 2, "Commonwealth Legislation affecting Oversea Trade" of this chapter, the full text of the variation of the agreement is given.

It has been estimated that during 1926–27, goods otherwise dutiable and amounting in value to £638,616 were admitted free under the provisions of the Preferential Tariff and the duty thus remitted was £142,004. In addition, goods valued at £716,974, which were dutiable under both general and preferential tariff were admitted, the duty remitted being £60,612. The total value of the customs concessions on the import of New Zealand goods was £202,616, representing a preference of 14.9 per cent.

(iv) *Dominion of Canada.* The negotiations for a reciprocal trade treaty between Canada and Australia reached finality during September, 1925, and a reciprocal Tariff agreement between the two countries is now in operation. The commodities on which Canada grants preferential rates of duty to Australia are:—Beeswax, butter, brandy, champagne, cheese, currants, eggs, eucalyptus oil, fruits (dried, fresh, and pulped), fruits in cans, glue, honey, lard, meat (fresh and canned), onions, raisins, sugar, tallow, vegetables in tins, and wine. Australia's preferential duties apply to the following Canadian imports:—Cash registers, corsets, fish, gloves, goloshes and rubber sand boots, etc., iron and steel tubes or pipes, printing machinery, paper (printing, typewriting and writing), typewriters, and vehicles, viz., motor chassis (unassembled and assembled), and vehicle parts, including undergear, axles, springs, hoods, wheels and bodies.

Imports of Canadian origin entitled to preference were valued in 1926–27 at £2,561,000, the principal items being printing paper £683,944, and fish £492,171. Australian exports to Canada subject to preference amounted to £1,022,224, the principal item being sugar, £869,717.

(v) *Papua and New Guinea.* Customs Tariff (Papua and New Guinea) Preference 1926 provides for Customs Preference on goods the produce of Papua and on goods the produce of the Territory of New Guinea. Imports into Australia, direct from the Territory of Papua or the Territory of New Guinea, of such of the goods specified in the schedule to the Act as were produced in the Territory from which they were imported, shall, notwithstanding anything contained in the Customs Tariff 1921–1924, be free of duty. The goods specified in the schedule are coffee, dried fruit, viz., litchi, fresh fruits (various local fruits), edible fungi, green ginger, coco-nuts and kapok and sesame seeds.

4. **Preferential Tariff of the United Kingdom.**—The post-war Tariff of the United Kingdom provides Preferential Customs rates on certain goods where they are shown to the satisfaction of the Commissioners of Customs and Excise to have been consigned from and grown, produced, or manufactured in the British Empire. Manufactured articles generally are not entitled to the preferential rates unless 25 per cent. of their value is the result of labour within the British Empire. The principal items of interest to Australia which are accorded preferential treatment under the Tariff of the United Kingdom are :—Fruits, dried and preserved ; jam ; fruit pulp ; preserved milk ; wine ; and brandy.

The question of Tariff Preference was discussed at the Imperial Economic Conference held in 1923, when the following resolution was adopted :—

> " This Imperial Economic Conference, holding that, especially in present circumstances, all possible means should be taken to develop the resources of the Empire and trade between the Empire Countries, desires to affirm the resolution on the subject of Imperial Preference passed by the Imperial War Conference of 1917."

The resolution was agreed to by all delegates, including the representative from Great Britain. The British Ministry in power at the time was prepared to grant certain increased preferences, but stipulated that their proposals could not go beyond the established fiscal system.

Before the proposals could be submitted to the British Parliament the Ministry in power at the date of conference was defeated. The new Prime Minister (Mr. Ramsay MacDonald) announced, however, that the Imperial Preference resolutions of the Imperial Economic Conference would be discussed in the House of Commons during June, 1924, and that the debate would be unfettered and the votes on non-party lines. The proposals duly came before Parliament, and as a result of the debate on Imperial Preference, the first four resolutions, which proposed Imperial Preference without imposing any new charge upon the foreigner, were defeated by small majorities. The other six resolutions, of which notice had been given, were then withdrawn.

After the election of October, 1924, a new Ministry, with Mr. Stanley Baldwin as Prime Minister, came into office and, in the Budget submitted to the House of Commons during June, 1925, clauses dealing with increased Imperial preference on Empire-grown tobacco, preserved and dried fruits, jams and jellies, spirits, wine, sugar, and hops were proposed and adopted. The new rates of duty took effect on 1st July, 1925, excepting that relating to hops, which came into operation on 16th August, 1925.

On the basis of the quantities of dried fruits, spirits, wine, sugar, canned fruits and jams and jellies imported into the United Kingdom from Australia during the year 1926, as shown in the Annual Statement of the Trade of the United Kingdom, it is estimated that £1,026,000 additional duty would have been collected if the same quantities of goods had been dutiable under the rates applicable to imports from foreign countries.

§ 15. Commonwealth Trade Representation in Overseas Countries.

The Commonwealth is represented in the United Kingdom by the High Commissioner for Australia (Maj.-Gen. Hon. Sir G. de L. Ryrie, K.C.M.G., C.B., V.D.), with headquarters at Australia House, London. Oversea trade matters affecting Australia come within the scope of the duties attaching to the office of High Commissioner.

The Commonwealth has a Trade Representative in France, with headquarters at Paris. This official is attached to the High Commissioner's office, London.

The first appointment of a Commissioner for Australia in the United States of America was made in 1918. Oversea trade matters affecting Australia come within the scope of the duties attaching to the office of Commissioner in United States of America.

Early in 1921 a Commonwealth Trade Commissioner was appointed in China, with offices at Shanghai and Hong Kong. This office was terminated in 1923. In 1922, an Australian Trade Representative in the East was appointed, with headquarters at Singapore, but the appointment was terminated in March, 1925.

CHAPTER VII.

TRANSPORT AND COMMUNICATION.

A. SHIPPING.

§ 1. System of Record.

So far as oversea vessels are concerned the system of record treats Australia as a unit, and counts, therefore, only one entry and one clearance for each voyage, without regard to the number of States visited.

On the arrival at, or departure from, a port in Australia, whether from or for an oversea country or from another port in Australia, the master or agent must "enter" the vessel with the Customs authorities at the port, and supply certain prescribed information in regard to the ship, passengers, and cargo. At the end of each month the information so obtained is entered on forms which are forwarded to the Commonwealth Bureau of Census and Statistics. These forms, which collectively provide a complete record of the movements of every vessel in Australian waters, furnish the material for the compilation of the Shipping and Migration Returns. The arrangement referred to has been in operation since the 1st July, 1924.

From the 1st July, 1914, the statistical year for the record of Trade and Shipping of Australia was altered from the calendar year to the fiscal year ending 30th June.

In all instances the tonnage quoted is net tonnage.

§ 2. Oversea Shipping.

1. **Total Movement.**—The following table gives the number and tonnage of oversea steam and sailing vessels entering Australian ports during the years 1922–23 to 1926–27 :—

TOTAL OVERSEA SHIPPING, ENTERED.—AUSTRALIA, 1922-23 TO 1926-27.

Year.	Steam.		Sailing.		Total.	
	Vessels.	Tons.	Vessels.	Tons.	Vessels.	Tons.
1922–23	1,341	4,599,021	148	138,833	1,489	4,737,854
1923–24	1,437	4,808,129	109	103,007	1,546	4,911,136
1924–25	1,675	5,535,871	51	60,529	1,726	5,596,400
1925–26	1,537	5,245.222	46	58,583	1,583	5,303,805
1926–27	1,598	5,512,840	26	46,030	1,624	5,558,870

The average tonnage of vessels entered has risen from 3,182 tons per vessel in 1922–23 to 3,421 tons in 1926–27.

Particulars regarding the total oversea movement of shipping for each year from 1822 to 1920–21 will be found in Official Year Book No. 15, p. 507.

2. **Comparison with other Countries.**—The place of Australia among various countries in regard to oversea shipping is indicated in the following table, which gives the latest available figures for total tonnage and tonnage per head of population.

OVERSEA SHIPPING.—VARIOUS COUNTRIES.

Country.	Calendar Year.	Tonnage Entered and Cleared. Total. ,000 omitted.	Tonnage Entered and Cleared. Per Inhabitant.
Australia	1927(*a*)	11,164	1·79
Belgium	1926	53,942	6·85
Brazil	1926	72,526	1·96
Canada	1927	46,015(*c*)	4·83
France	1926	81,888(*b*)	2·00
Germany	1925	64,656	1·02
Great Britain	1926	169,815	3·75
India	1926	17,040	0·05
Japan	1925	86,098	1·03
Netherlands	1926	73,191	9·72
New Zealand	1926	4,499	3·34
Norway	1926	11,974	4·29
Spain	1926	56,133	2·51
Sweden	1926	27,221	4·48
Union of South Africa	1926	12,742	1·69
United States	1926	159,527(*c*)	1·36

(*a*) To 30th June. (*b*) With cargoes only. (*c*) Exclusive of vessels trading on lakes and rivers between Canada and the United States.

3. Shipping Communication with various Countries.—In view of the defects in records purporting to show vessels and tonnage for particular countries (as pointed out on p. 265 of Official Year Book No. 17) it has been decided to restrict the statistics relating to the direction of shipping to and from Australia to the following tables in which countries situated on the main trade routes have been grouped. The grouping into larger geographical divisions to some extent avoids the limitations referred to, except in the case of Africa owing to its geographical situation as a place of call for vessels proceeding to or from other ports.

OVERSEA SHIPPING, AUSTRALIA.—DIRECTION, 1922-23 TO 1926-27.

Countries.	Cargo and Ballast.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
		TONNAGE ENTERED.				
United Kingdom and European Countries	Cargo	1,926,907	1,769,446	1,797,322	1,815,268	1,834,752
	Ballast	72,819	23,690	186,256	21,444	31,267
New Zealand	Cargo	392,526	500,001	459,252	507,238	474,639
	Ballast	167,187	401,959	393,706	256,003	212,953
Asiatic Countries and Islands in the Pacific	Cargo	821,036	893,179	1,002,634	1,090,062	1,217,572
	Ballast	279,043	188,762	390,300	210,196	288,287
Africa	Cargo	32,025	25,036	26,709	23,070	16,540
	Ballast	122,660	24,015	145,216	66,494	91,582
North and Central America	Cargo	911,026	1,059,229	1,138,091	1,283,073	1,353,526
	Ballast	2,944	5,403	17,235	..	27,228
South America	Cargo	5,470	12,039	13,895	10,373	1,840
	Ballast	4,211	8,377	25,784	20,584	8,684
	Cargo	4,088,990	4,258,930	4,437,903	4,729,084	4,898,869
	Ballast	648,864	652,206	1,158,497	574,721	660,001
Total	..	4,737,854	4,911,136	5,596,400	5,303,805	5,558,870
		TONNAGE CLEARED.				
United Kingdom and European Countries	Cargo	2,193,528	2,127,662	2,786,002	2,344,201	2,543,362
	Ballast	11,776	13,699	8,097	17,590	15,224
New Zealand	Cargo	518,972	792,565	768,625	678,616	627,538
	Ballast	49,097	61,943	59,349	57,710	41,020
Asiatic Countries and Islands in the Pacific	Cargo	922,243	1,066,807	1,033,553	1,120,019	1,181,485
	Ballast	100,832	193,982	224,522	273,054	298,862
Africa	Cargo	121,175	105,127	174,697	154,250	155,300
	Ballast	..	3,558	14,020	3,418	16,425
North and Central America	Cargo	436,800	443,864	408,476	492,088	445,835
	Ballast	35,011	75,201	58,762	162,008	199,209
South America	Cargo	89,816	118,525	64,433	58,090	74,531
	Ballast	23,675	8,745	3,583	3,840	6,309
	Cargo	4,282,534	4,654,550	5,235,786	4,847,264	5,028,051
	Ballast	220,391	357,128	368,333	517,620	577,049
Total	..	4,502,925	5,011,678	5,604,119	5,364,884	5,605,100

4. **Nationality of Oversea Shipping.**—(i) *General.* The greater part of the shipping visiting Australia is of British nationality, though in 1926–27 the proportion of British tonnage, 74.68 per cent., was the lowest recorded since 1920–21, in which year the percentage was 69.69 per cent.

Particulars of the nationality of oversea shipping for the last five years are given in the following table :—

OVERSEA SHIPPING, AUSTRALIA.—NATIONALITY OF VESSELS ENTERED, 1922-23 TO 1926-27.

Nationality.	Tonnage.				
	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
BRITISH—					
Australian	645,867	486,170	424,634	381,178	405,968
United Kingdom ..	2,754,316	2,939,210	3,209,865	2,967,317	3,097,888
Canadian	110,095	95,655	70,165	68,091	86,701
New Zealand	66,521	307,928	488,481	492,255	458,716
Other British	72,438	55,302	62,772	76,226	102,201
Cargo.. ..	3,226,702	3,342,994	3,418,124	3,549,627	3,704,196
Ballast ..	422,535	541,271	837,793	435,440	447,278
Total British ..	3,649,237	3,884,265	4,255,917	3,985,067	4,151,474
Per cent. on total ..	77.02	79.09	76.05	75.14	74.68
FOREIGN—					
Danish	39,394	54,161	43,311	85,152	61,376
Dutch	141,264	138,716	162,385	124,824	115,363
French	114,102	84,701	104,312	109,417	99,832
German	44,666	44,354	81,213	76,650	140,810
Italian	50,608	61,312	115,931	62,046	61,583
Japanese	243,935	143,954	297,657	246,193	210,486
Norwegian	148,873	173,311	219,258	264,037	302,958
Swedish	82,230	90,641	86,704	96,625	111,920
United States	194,180	191,938	186,089	205,391	231,468
Other Foreign	29,365	43,783	43,623	48,403	71,600
Cargo.. ..	862,288	915,936	1,019,779	1,179,457	1,194,673
Ballast ..	226,329	110,935	320,704	139,281	212,723
Total Foreign ..	1,088,617	1,026,871	1,340,483	1,318,738	1,407,396
Per cent. on total ..	22.98	20.91	23.95	24.86	25.32
Cargo.. ..	4,088,990	4,258,930	4,437,903	4,729,084	4,898,869
Per cent. on total	86.30	86.72	79.30	89.16	88.13
Ballast ..	648,864	652,206	1,158,497	574,721	660,001
Per cent. on total	13.70	13.28	20.70	10.84	11.87
Grand Total ..	4,737,854	4,911,136	5,596,400	5,303,805	5,558,870

The Australian tonnage which entered Australia from overseas during the year 1926–27 represented 7.30 per cent. of the total tonnage entered. This figure was less than the average for the quinquennium, which was 8.98 per cent., the decrease being due mainly to the disposal of vessels owned by the Commonwealth Government to foreign or other Australian owners. In the latter instance, the purchasers generally are using the vessels in the interstate trade.

(ii) *Proportion of British and Foreign with Cargo.* (*a*) *Tonnage of Vessels.* The relative proportions of British and foreign tonnage which entered Australia with cargo during the last five years are given in the next table. These figures may be considered to indicate more accurately the proportion of the actual carrying trade done than does the total tonnage.

OVERSEA SHIPPING, AUSTRALIA.—PERCENTAGE BRITISH AND FOREIGN ENTERED WITH CARGO, 1922-23 TO 1926-27.

Nationality.	1922–23.	1923–24.	1924–25.	1925–26	1926–27.
British	78.91	78.49	77.02	75.06	75.61
Foreign	21.09	21.51	22.98	24.94	24.39
Total	100.00	100.00	100.00	100.00	100.00

During the period under review the average annual proportion of foreign tonnage entering with cargo was 23.08 per cent.

(*b*) *Tonnage of Cargo.* In Transport and Communication Bulletin, No. 19 (p. 36) published by this Bureau, a statement is given of the tonnage of oversea cargo discharged and shipped during the year 1926–27 according to the nationalities of the vessels engaged in the carrying trade.

While the tonnage of British vessels entering with cargo represented 75.61 per cent. of the total, the amount of cargo discharged from such vessels was 72.51 per cent. The foreign country which had the largest amount of shipping tonnage engaged with Australia during the year 1926–27 was Norway, its vessels contributing 5.45 per cent. of the total tonnage entered with cargo and 7.79 per cent. of the total cargo discharged and 7.26 per cent. of the cargo shipped.

(iii) *Principal Foreign Countries Engaged.* The following table shows the tonnage entered and cleared in connexion with the principal foreign countries engaged in the oversea carrying trade of Australia :—

OVERSEA SHIPPING, AUSTRALIA.—FOREIGN TONNAGE, 1926-27.

Countries.	Nationality.							
	Japanese.		French.		United States.		Dutch.	
	Entered.	Cleared.	Entered.	Cleared.	Entered.	Cleared.	Entered.	Cleared.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
EUROPEAN COUNTRIES—								
United Kingdom ..	..	12,758	..	..	..	6,172	..	6,600
France	..	..	30,228	29,327	..	..	..	..
Other European Countries	..	..	6,093	17,231	..	3,801	55,452	62,834
ASIATIC COUNTRIES AND ISLANDS IN THE PACIFIC—								
Netherlands East Indies	..	..	..	1,109	4,960	3,529	17,831	14,920
Japan	167,815	168,465	..	..	..	..	..	..
Straits Settlements ..	3,247	6,022	..	..	..	..	37,274	44,932
Other Asiatic Countries	6,736	8,087	..	..	..	31,821	..	..
New Zealand	3,386	3,386	..	..	..	..	..	..
New Caledonia ..	..	..	51,951	50,574	..	..	2,060	..
Other Pacific Islands ..	6,009	..	11,560	11,562	..	5,257	..	..
AFRICAN COUNTRIES ..	..	8,011	..	..	1,427	2,452	..	..
NORTH AMERICAN COUNTRIES—								
United States . ..	15,898	..	..	..	211,050	186,837	2,746	..
Canada	7,395	..	..	..	14,031	3,331	..	..
SOUTH AMERICAN COUNTRIES	..	..	..	..	..	6,843	..	..
With Cargo ..	167,884	200,600	79,873	109,803	230,041	210,637	109,044	124,395
In Ballast ..	42,602	6,129	19,959	..	1,427	39,406	6,319	4,891
Total	210,486	206,729	99,832	109,803	231,468	250,043	115,363	129,286

The largest proportion of the foreign tonnage entered is employed between its home ports or the colonies of its own country and Australia, e.g., French shipping is engaged chiefly between Australia, France and New Caledonia, while Dutch ships are employed almost entirely between Australia and the Netherlands, the Netherlands East Indies, or Straits Settlements. The bulk of the Japanese tonnage was recorded as entering from and clearing for Japan.

(iv) *Nationality of Steam and Sailing Tonnage.* A further analysis is appended, distinguishing between steam and sailing vessels of British and foreign nationality which entered Australia during the years 1922–23 to 1926–27.

OVERSEA SHIPPING, AUSTRALIA.—NATIONALITY OF STEAM AND SAILING VESSELS ENTERED, 1922-23 TO 1926-27.

Description and Nationality of Vessels.	1922–23.		1923–24.		1924–25.		1925–26.		1926–27.	
	Tonnage.	Percentage.	Tonnage.	Percentage.	Tonnage.	Percentage.	Tonnage.	Percentage.	Tonnage.	Percentage.
Steam—										
British ..	3,634,411	79	3,866,900	80	4,242,511	77	3,972,307	76	4,146,144	75
Foreign ..	964,610	21	941,229	20	1,293,360	23	1,272,915	24	1,366 696	25
Total Steam	4,599,021	100 (97)	4,808,129	100 (98)	5,535,871	100 (99)	5,245,222	100 (99)	5,512,840	100 (99)
Sailing—										
British ..	14,826	11	17,365	17	13,406	22	12,760	22	5,330	12
Foreign ..	124,007	89	85,642	83	47,123	78	45,823	78	40,700	88
Total Sailing	138,833	100 (3)	103,007	100 (2)	60,529	100 (1)	58,583	100 (1)	46,030	100 (1)
Steam and Sailing—										
British ..	3,649,237	77	3,884,265	79	4,255,917	76	3,985,067	75	4,151,474	75
Foreign ..	1,088,617	23	1,026,871	21	1,340,483	24	1,318,738	25	1,407,396	25
Total ..	4,737,854	100	4,911,136	100	5,596,400	100	5,303,805	100	5,558,870	100

As might naturally be expected there was a considerable decline in the figures for sailing tonnage during the period under review.

5. **Tonnage in Ballast.**—(i) *Total and Percentage by Nationality.* The following table shows the tonnage according to nationality of oversea vessels which entered and cleared Australia in ballast during the years 1922–23 to 1926–27 :—

OVERSEA SHIPPING, AUSTRALIA.—TONNAGE IN BALLAST, 1922-23 TO 1926-27.

Year.	Entered.			Cleared.		
	British.	Foreign.	Total.	British.	Foreign.	Total.
			TOTAL TONNAGE.			
1922–23 ..	422,535	226,329	648,864	155,605	64,786	220,391
1923–24 ..	541,271	110,935	652,206	254,069	103,059	357,128
1924–25 ..	837,793	320,704	1,158,497	164,972	203,361	368,333
1925–26 ..	435,440	139,281	574,721	309,398	208,222	517,620
1926–27 ..	447,278	212,723	660,001	415,806	161,243	577,049
			PERCENTAGE.			
1922–23 ..	11.58	20.79	13.70	4.49	6.23	4.89
1923–24 ..	13.93	10.80	13.28	6.48	9.45	7.13
1924–25 ..	19.68	23.92	20.70	4.41	10.93	6.57
1925–26 ..	9.15	10.56	10.84	7.63	3.88	9.64
1926–27 ..	10.77	15.11	11.87	10.04	11.03	10.29

(ii) *Tonnage entered in Ballast—States.* The tonnage which entered each State in ballast during 1926–27 was as follows :—

OVERSEA TONNAGE IN BALLAST ENTERING STATES, 1926-27.

State.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Total.
Tonnage ..	265,247	67,994	7,639	73,052	211,272	29,922	4,875	660,001
Percentage on total ..	40.19	10.30	1.16	11.07	32.01	4.53	0.74	100.00

In normal times the large exports of coal from New South Wales afford special inducements to vessels in search of freights. The tonnage in ballast into New South Wales is mainly for coal cargo, into Victoria for wheat, into South Australia for wheat and ore, and into Western Australia for timber and wheat.

§ 3. Shipping of Ports.

1. **Tonnage Entered.**—The total shipping tonnage—oversea, interstate, and coastwise—which entered the more important ports of Australia during the year 1926–27, together with similar information in regard to some of the ports of New Zealand for the year 1927 and of Great Britain for the year 1926—will be found in the next table :—

SHIPPING OF PORTS, AUSTRALIA, NEW ZEALAND, AND THE UNITED KINGDOM.

Port.	Tonnage Entered.	Port.	Tonnage Entered.
AUSTRALIA—		ENGLAND AND WALES—	
Sydney	9,546,973	London	24,577,346
Melbourne	7,324,530	Liverpool (inc. Birkenhead)	15,950,051
Adelaide	4,877,664	Southampton	10,772,442
Newcastle	4,815,525	Plymouth	5,751,295
Brisbane	3,315,130	Hull	5,598,950
Fremantle	3,283,438	Cardiff	5,084,954
Townsville	1,028,106	Tyne Ports	5,050,076
Hobart	808,534	Manchester (inc. Runcorn)	4,031,120
Geelong	770,886	Bristol	3,155,487
Kembla	709,003	Swansea	2,760,963
Pirie	684,501	Middlesbrough ..	2,403,640
Cairns	618,026	Grimsby (inc. Immingham)	2,097,389
Albany	581,219	Newport	2,061,140
Mackay	458,579	Beaumaris (inc. Holyhead)	1,872,553
Bunbury	379,319	Dover	1,757,945
Burnie	371,516	Sunderland	1,462,648
Launceston	369,082	Falmouth	1,009,227
Thursday Island ..	356,807	Blyth..	985,807
Wallaroo	331,778		
Devonport	313,067		
Bowen	246,576	SCOTLAND—	
Rockhampton	212,541	Glasgow	5,643,735
NEW ZEALAND—		Leith	2,062,411
Wellington	3,430,594		
Auckland	2,450,714		
Lyttelton	1,961,630	NORTHERN IRELAND—	
Otago	951,504	Belfast	4,105,819

Transport and Communication Bulletin No. 19 gives more detailed information regarding the shipping entered at Australian ports.

§ 4. Vessels Built and Registered.

1. Vessels Built.—The following table shows the number and tonnage of vessels built in Australia during each of the calendar years 1923 to 1927, so far as such information can be ascertained from the Shipping Registers of the various States. The Merchant Shipping Act, under which vessels are registered in Australia, does not, however, make it compulsory to register vessels under 15 tons burthen if engaged in river or coastal trade. Larger vessels are also exempt from registration if not engaged in trade. Yachts and small trading vessels may be, and frequently are, registered at the request of the owners. As the Shipping Registers are the source of information, it follows that the figures given below will be subject to additions in the future, inasmuch as vessels already built may be added to the register at some future date.

VESSELS BUILT IN AUSTRALIA, 1923 TO 1927.

NUMBER.

Year.	Steamers built of—					Oil Motor Vessels.	Sailing.	Pontoons, Dredges, etc.	Total.
	Wood.	Iron.	Steel.	Composite.	Total.				
1923 ..	..	..	3	1	4	9	1	2	16
1924 ..	2	..	2	..	4	14	..	..	18
1925 ..	..	..	6	..	6	19	1	..	26
1926 ..	1	..	..	..	1	7	..	..	8
1927 ..	..	..	..	..	..	4	..	..	4

TONNAGE.

Year.	Steamers.		Oil Motor Vessels.		Sailing.		Pontoons, Dredges, etc.		Total.	
	Gross.	Net.	Gross.	Net.	Gross.	Net.	Gross.	Net.	Gross.	Net.
1923 ..	7,089	4,011	161	118	100	80	414	386	7,764	4,595
1924 ..	19,665	11,480	331	242	..	..	..	..	19,996	11,722
1925 ..	4,074	1,478	302	238	13	13	..	..	4,389	1,729
1926 ..	36	27	108	63	..	..	..	..	144	90
1927 ..	..	..	76	52	..	..	..	..	76	52

2. Vessels Registered.—The following table shows the number and net tonnage of steam, sailing, and other vessels on the registers of the States and of the Northern Territory on the 31st December, 1927:—

VESSELS ON THE STATE REGISTERS, 31st DECEMBER, 1927.

States and Territory.	Steam.				Sailing.				Barges, Hulks, Dredges, etc., not Self-propelled.		Total.	
	Dredges and Tugs.		Other.		Fitted with Auxiliary Power.		Other.					
	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.
New South Wales ..	53	1,522	423	91,863	226	3,032	232	11,135	49	12,741	983	120,293
Victoria	36	3,841	189	188,929	39	1,145	67	4,412	68	27,575	399	225,902
Queensland ..	19	2,750	53	14,548	37	492	100	1,517	32	4,405	241	23,712
South Australia ..	17	647	79	34,067	47	2,811	34	822	50	7,601	227	45,948
Western Australia	9	173	29	14,826	17	415	315	4,668	23	7,210	393	27,292
Tasmania ..	6	478	52	3,751	51	1,246	68	2,661	2	563	179	8,699
Northern Territory	..	..	..	..	1	17	21	207	..	..	22	224
Total ..	140	9,411	825	347,984	418	9,158	837	25,422	224	60,095	2,444	452,070

Particulars of the number of vessels on the registers classified according to tonnage will be found in the Transport and Communication Bulletin issued by this Bureau.

§ 5. Interstate Shipping.

1. **System of Record.**—*Interstate Shipping* comprises two elements, viz. :—(*a*) Vessels engaged solely in interstate trade ; and (*b*) Vessels trading between Australia and oversea countries and in the course of their voyage proceeding from one State to another. (It should be mentioned that these vessels, except under special circumstances, do not now engage in interstate carrying.) A detailed explanation of the methods adopted in dealing with the returns under each heading will be found on page 272 of Official Year Book No. 17, but limitation of space precludes its repetition in the present volume.

2. **Vessels and Tonnage Entered.**—The following table gives the number and tonnage of vessels recorded as having entered each State from any other State during each of the years 1922-23 to 1926-27. The shipping on the Murray River, between the States of New South Wales, Victoria, and South Australia is not included.

INTERSTATE SHIPPING.—NUMBER AND TONNAGE OF VESSELS ENTERED, 1922-23 TO 1926-27.

States and Territory.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
			NUMBER.		
New South Wales ..	1,848	2,071	1,902	1,759	2,022
Victoria	1,886	1,920	1,815	1,743	1,870
Queensland	548	519	460	452	487
South Australia	822	867	798	838	949
Western Australia ..	364	363	421	337	366
Tasmania	1,169	1,193	1,091	1,024	1,014
Northern Territory ..	18	22	24	20	24
Total	6,655	6,955	6,511	6,173	6,732
			TONNAGE.		
New South Wales ..	4,278,072	4,677,576	4,581,395	4,244,524	4,626,263
Victoria	3,581,571	3,724,273	3,593,320	3,394,123	3,787,217
Queensland	1,123,192	1,032,101	1,041,754	1,011,106	1,056,045
South Australia	2,453,776	2,501,928	2,348,566	2,391,535	2,725,309
Western Australia ..	1,630,730	1,668,713	1,900,077	1,648,977	1,778,919
Tasmania	1,023,645	1,200,569	1,098,556	1,161,672	1,171,857
Northern Territory ..	52,107	54,347	57,658	51,760	62,663
Total	14,143,093	14,859,507	14,621,326	13,903,697	15,208,273

3. **Oversea Vessels Moving Interstate.**—To ascertain the aggregate movement of shipping between the States during the year 1926–27, including the total interstate

movements of oversea vessels, the figures in the following table, which give the number and tonnage of vessels entered from or cleared for oversea countries via other Australian States, must be added to those in the table preceding :—

SHIPPING ENTERED AND CLEARED FROM AND TO OVERSEA COUNTRIES VIA OTHER AUSTRALIAN STATES, 1926-27.

States and Territory.	Entered.		Cleared.		Total.	
	Vessels.	Tonnage.	Vessels.	Tonnage.	Vessels.	Tonnage.
New South Wales ..	594	2,745,312	505	2,389,971	1,099	5,135,283
Victoria	593	2,711,810	493	2,317,974	1,086	5,029,784
Queensland	226	1,189,536	242	1,228,349	468	2,417,885
South Australia ..	370	1,918,052	267	1,439,753	637	3,357,805
Western Australia ..	59	209,635	8	26,227	67	235,862
Tasmania	25	98,902	88	502,396	113	601,298
Northern Territory ..	..	..	..	..	..	..
Total	1,867	8,873,247	1,603	7,904,670	3,470	16,777,917

Oversea vessels moving interstate are with few exceptions not engaged in the active interstate trade of Australia, but are merely proceeding to the several States in continuation of their oversea voyage.

4. **Vessels engaged Solely in Interstate Trade.**—Eliminating all interstate movements of oversea vessels, the number and tonnage of vessels engaged solely in the interstate trade for Australia as a whole during the years 1922–23 to 1926–27 were as follows :—

NUMBER AND TONNAGE OF VESSELS ENGAGED SOLELY IN INTERSTATE TRADE, 1922-23 TO 1926-27.

Year.	Entered.		Cleared.	
	No.	Tons.	No.	Tons.
1922–23	5,230	7,506,324	5,624	7,624,311
1923–24	5,565	8,228,391	5,546	8,109,094
1924–25	4,909	6,960,923	4,906	6,953,546
1925–26	4,690	6,677,578	4,628	6,622,175
1926–27	5,129	7,303,603	5,146	7,422,571

5. **Total Interstate Movement of Shipping.**—(i) *Australia.* The appended table shows the total inward interstate movement of shipping for each of the years 1922–23 to 1926–27 :—

TOTAL INWARD INTERSTATE MOVEMENT OF SHIPPING, 1922-23 TO 1926-27.

Vessels.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	Tons.	Tons.	Tons.	Tons.	Tons.
Oversea vessels moving interstate	14,214,800	14,437,674	15,856,487	15,001,432	16,777,917
Vessels solely interstate ..	7,506,324	8,228,391	6,960,923	6,677,578	7,422,571
Total	21,721,124	22,666,065	22,817,410	21,679,010	24,200,488

(ii) *States.* The following table shows the number and tonnage of vessels which entered and cleared each State during 1926–27, including the coastal movements of oversea vessels :—

INTERSTATE SHIPPING OF EACH STATE, 1926-27.

States and Territory.	Entered.		Cleared.	
	Vessels.	Tonnage.	Vessels.	Tonnage.
New South Wales	2,616	7,371,575	2,603	7,287,965
Victoria	2,463	6,499,027	2,504	6,641,030
Queensland	713	2,245,581	771	2,476,896
South Australia	1,319	4,643,361	1,305	4,574,631
Western Australia	425	1,988,554	370	1,824,593
Tasmania	1,039	1,270,759	1,040	1,331,563
Northern Territory	24	62,663	23	63,810
Total, Australia	8,599	24,081,520	8,616	24,200,488

6. **Interstate and Coastal Services.**—The subjoined table gives particulars, so far as they are available, of all steamships engaged in regular interstate or coastal services at the end of each of the years 1923 to 1927 :—

AUSTRALIAN INTERSTATE AND COASTAL STEAMSHIP SERVICES, 1923 TO 1927.

Particulars.		1923.	1924.	1925.	1926.	1927.
Number of companies making returns		35	39	41	44	40
Number of steamships		205	207	209	216	212
Tonnage	Gross	384,650	382,822	384,004	375,893	398,894
	Net	220,042	217,609	216,390	214,028	214,703
Horse-power (Nominal) ..		36,934	37,841	38,750	37,129	39,545
Number of passengers for which licensed	1st class ..	9,184	9,538	9,110	8,686	7,909
	2nd class and steerage	4,756	4,343	4,204	3,650	3,438
Complement of Crew	Masters and officers	704	681	684	691	698
	Engineers ..	645	631	645	342	662
	Crew	5,614	5,336	5,190	5,102	5,176

§ 6. Tonnage of Cargo.

The table hereunder shows the aggregate tonnage of oversea cargo discharged and shipped in Australian ports, and the tonnage of interstate cargo shipped in all ports for the years 1922–23 to 1926–27. Cargo which was stated in cubic feet has been converted to weight on the basis of 40 cubic feet to the ton.

AUSTRALIAN SHIPPING—CARGO MOVEMENT, 1922-23 TO 1926-27.

Year.	Oversea Cargo.		Interstate Cargo.
	Discharged.	Shipped.	Shipped.
	Tons.	Tons.	Tons.
1922–23	3,718,795	4,064,196	5,137,651
1923–24	4,377,171	4,981,521	6,358,191
1924–25	4,696,112	6,498,098	6,413,975
1925–26	5,342,621	5,169,407	5,735,973
1926–27	5,955,212	5,246,141	6,796,156

More detailed information regarding the volume of trade at each of the principal ports is contained in Transport and Communication Bulletin No. 19 issued by this Bureau.

§ 7. Commonwealth Government Shipping and Shipbuilding Activities.

1. Local Building Programme.—The original Commonwealth Government programme of ship construction in Australia provided for 48 vessels, 24 of which were to be wooden sailing vessels, and the remainder steel cargo ships. Owing to certain variations, the programme resulted in the building of 21 steel cargo vessels and 2 five-masted schooners with auxiliary power.

Particulars of the vessels built in Australia to 31st December, 1922, were included in a previous issue of this book (see Year Book Nos. 16, p. 273 and 17, p. 269).

2. Vessels Built in the United Kingdom.—In addition to the vessels previously referred to, five steamers each approximately 8,450 tons net were constructed in yards in the United Kingdom.

These vessels each have an approximate length of 520 feet by 68 feet beam, and a capacity of 900,000 cubic feet, of which 370,000 cubic feet are insulated.

3. Australian Commonwealth Line of Steamers.—(i) *Foundation of Line.* The Commonwealth Shipping Act 1923 provided for the establishment of the Australian Commonwealth Line of Steamers under the control of a Board of Directors consisting of not less than three nor more than five members. The date at which the Act was to come into force was fixed by proclamation as 1st September, 1923.

The whole of the right, title, and interest of the Commonwealth in and to the 50 vessels (155,302 tons net) of the Commonwealth Government Line of Steamers, and appurtenances used for the purposes of such vessels, was vested in the Board, also four other vessels (15,442 tons net) which were under construction at the time of transfer. The valuation of the vessels, tackle, apparel, gear, furniture, stores and equipment was fixed at £4,718,150, office furniture and fittings at £7,500, and stores on hand £23,700, making a total of £4,749,350.

The balance-sheet of the Commonwealth Shipping Board, covering the activities of the Australian Commonwealth Line of Steamers and the Cockatoo Island Dockyard to the 31st March, 1927, shows liabilities to the total of £6,676,476 and assets £4,754,070. The operations for the three years 1923 to 1927 show an accumulated loss of £1,922,406, the loss on operations for 1926–27 being £593,572.

(ii) *Disposal of Line.* At the end of the year 1927, the only vessels owned by the Commonwealth Government Line of Steamers were as follows (net tonnage in parenthesis) :—*Largs Bay* (8,432), *Jervis Bay* (8,423), *Moreton Bay* (8,420), *Esperance Bay* (8,415), and *Hobson's Bay* (8,413) all one-class passenger-carrying steamers, and the freighters *Fordsdale* (5,661) and *Ferndale* (5,656) ; a total net tonnage of 53,420 tons.

Following an investigation by the Parliamentary Joint Committee of Public Accounts into the operations of the Commonwealth Shipping Board, it was decided to dispose of the remaining vessels of the line, and tenders for their purchase were called in January, 1928. Three tenders were submitted, and that on behalf of the White Star Line, £1,900,000, was accepted, and the sale effected in April, 1928. The contract of sale provided, *inter alia*, that the purchaser was to maintain a service equivalent to that provided under the management of the Commonwealth Shipping Board and also to maintain an efficient Australian organization.

§ 8. World's Shipping Tonnage.

The table hereunder shows the number and gross tonnage of steam and motor, and of sailing vessels owned by the most important maritime countries, together with the proportion of the grand total owned by each country :—

WORLD'S SHIPPING TONNAGE, 1st July, 1927.

Nationality.	Steam and Motor.		Sailing.		Total.		Percentage on Total.	
	No.	Gross Tonnage.	No.	Gross Tonnage.	No.	Gross Tonnage.	No.	Gross Tonnage.
Great Britain and Nthn. Ireland	7,820	19,179,029	396	129,993	8,216	19,309,022	26.08	30.96
Australia and New Zealand	614	773,809	18	9,250	632	783,059	2.01	1.26
Canada(*a*) ..	561	835,200	225	99,898	786	935,098	2.49	1.50
Other British ..	682	773,637	229	53,128	911	826,765	2.89	1.33
Total, British Empire ..	9,677	21,561,675	868	292,269	10,545	21,853,944	33.47	35.05
Belgium ..	221	494,839	3	4,390	224	499,229	0.71	0.80
Denmark ..	649	1,031,798	99	28,048	748	1,059,846	2.37	1.70
France ..	1,525	3,361,679	227	108,301	1,752	3,469,980	5.56	5.56
Germany ..	1,951	3,320,492	39	42,554	1,990	3,363,046	6.32	5.39
Greece ..	474	1,025,730	10	3,083	484	1,028,813	1.54	1.65
Holland ..	1,125	2,645,025	31	8,978	1,156	2,654,003	3.67	4.26
Italy	1,132	3,395,522	297	87,861	1,429	3,483,383	4.54	5.59
Japan ..	2,035	4,033,304	..	..	2,035	4,033,304	6.46	6.47
Norway ..	1,777	2,802,552	28	21,673	1,805	2,824,225	5.73	4.53
Spain ..	793	1,135,725	92	25,644	885	1,161,369	2.81	1.86
Sweden ..	1,220	1,328,745	151	36,645	1,371	1,365,390	4.35	2.19
United States of America(*b*) ..	3,135	11,256,255	805	898,767	3,940	12,155,022	12.51	19.49
Other Foreign Countries ..	2,606	3,122,974	532	282,999	3,138	3,405,973	9.96	5.46
Total, Foreign Countries ..	18,643	38,954,640	2,314	1,548,943	20,957	40,503,583	66.53	64.95
Grand Total ..	28,320	60,516,315	3,182	1,841,212	31,502	62,357,527	100.00	100.00

(*a*) Sea-going. (*b*) Including Philippine Islands.

The foregoing figures have been compiled from Lloyd's Register of Shipping, and vessels of 100 tons or upwards only have been included.

§ 9. Ferries.

1. **New South Wales.**—The ferry services in Port Jackson are under the control of two companies, which during the year 1927 had 68 vessels in commission, 66 of which were double-ended screw steamers, the remaining two being motor driven. It is claimed for the steamers that they are superior in size and equipment to boats employed on similar service in any other part of the world.

2. **Victoria.**—The Williamstown City Council owns one steamer which is engaged in the transport of passengers between Port Melbourne and Williamstown. There are several other steamers which are engaged during the summer season in the carriage of passengers and goods to the several seaside resorts. Particulars of these services, however, are not included in the table in sub-par. 6 following.

3. **Queensland.**—The Brisbane City Council and the Balmoral Shire Council control the ferry services in the Metropolitan area, but such ferries are really substitutes for bridges and have therefore not been included in the table hereunder.

4. **Western Australia.**—The ferries plying on the Swan River during 1927 were operated by a private company, and consisted of 8 petrol-driven vessels. At South Perth the Western Australian Government employed 4 vessels, 2 of which were steamers.

5. **Tasmania.**—In and around Hobart there were in 1927, 4 ferry services, 2 being controlled by private companies which had 6 steamers in commission, 1 by the Public Works Department with 2 motor-propelled vessels, and 1 by the Railway Department with 1 steamer.

6. **Particulars of Working.**—The subjoined table shows for the year 1927, so far as returns are available, the most important items in connexion with the operation of the ferry services in the several States :—

FERRIES.—PARTICULARS OF WORKING, 1927.

Particulars.	New South Wales.	Victoria.	Western Australia.	Tasmania.	Total.
Boats in Service—					
Steam .. No.	66	1	2	7	76
Other .. No.	2	..	10	2	14
Total .. No.	68	1	12	9	90
Number of passengers which boats are licensed to carry .. No.	46,380	342	1,759	2,850	51,331
Revenue .. £	786,432	5,990	16,784	(d) 22,282	831,488
Working Expenses £	719,880	7,271	14,923	31,168	773,242
Passengers carried(b) No.	51,471,816	300,000	1,275,713	(d) 695,101	53,742,630
Mileage of Boats miles	(a)	19,050	92,674	94,895	(c) 206,619
Accidents—					
Killed .. No.	21	..	..	..	21
Injured .. No.	143	..	2	..	145
Employees—					
Salaried Staff No.	48	..	3	1	52
Wages Staff No.	1,184	8	29	37	1,258

(a) Not Available. (b) Approximate. (c) Incomplete. (d) Exclusive of Bellerive Ferry.

7. **Other Services.**—In addition to the foregoing there are throughout the several States a number of row-boat ferry services, and on many of the principal inland rivers punts are in operation.

§ 10. Miscellaneous.

1. **Lighthouses.**—Transport and Communication Bulletin No 14, published by this Bureau, contains a list of the principal lighthouses on the coast of Australia, giving details of the location, number, colour, character, period, candle-power, and visibility of each light so far as particulars are available.

2. **Distances by Sea.**—A statement giving the distances by sea between the ports of the capital cities of Australia and the most important ports in other countries which trade with Australia was also included in Transport and Communication Bulletin No. 14.

3. **Shipping Freight Rates.**—The Quarterly Summary of Australian Statistics gives a list of the ruling freight rates for general merchandise both in respect of oversea and interstate shipments. The latest figures available, which give the rates current at 30th June, 1928, show that the rate for general merchandise from Australia to United Kingdom and Continent was 63s. per ton weight or measurement, as compared with 55s. per ton in 1915.

4. **Depth of Water at Main Ports.**—A table compiled from information supplied by the Director of Navigation showing the depth of water at the main ports of Australia at 1st January, 1928, has been included in the Transport and Communication Bulletin No. 18. published by this Bureau.

5. **Shipping Casualties.**—Courts of Marine Inquiry are constituted by a Magistrate, assisted by skilled assessors, and when necessary are held at the principal port in each State and at Launceston (Tasmania). Such courts have power to deal with the

certificates of officers found to be at fault. Particulars of shipping casualties reported on or near the coast during the year 1926–27 are shown in the Transport and Communication Bulletin No. 19. This information has also been furnished by the Director of Navigation.

6. **Commonwealth Navigation and Shipping Legislation.**—(i) *General.* An account, in some detail, of the Commonwealth Navigation and Shipping Legislation was published in Official Year Book No. 17 (pp. 1053-5), but considerations of space preclude its repetition in this present volume.

(ii) *Amending Acts.* Under the provisions of the Navigation Act 1926 (March. 1926). permission may be granted by the Governor-General in Council in certain specified circumstances to unlicensed British ships to engage in passenger tourist traffic between any specified Commonwealth ports. Certain vessels were granted permission to engage in the carriage of passengers between the port of Hobart and the ports of Brisbane, Sydney and Melbourne during the period 6th March. 1926, to 31st May, 1926, and between the 1st January, 1927, and 31st May, 1927. This permission may be renewed from time to time as occasion demands. The Navigation Act 1925 (July, 1925), conferred authority for the suspension, for any specified time, if in the opinion of the Governor-General in Council such is expedient in the public interest, of the operation of the provisions of that part of the principal Act relating to the engagement of ships in the coasting trade by exempting under certain circumstances any ship or class of ships from compliance with any specified provision or provisions of the Act.

7. **Ports and Harbours.**—A report in two volumes on *Transport in Australia*, with special reference to Ports and Harbours facilities, has been submitted to the Commonwealth Government by Sir George Buchanan, and published as a Parliamentary Paper, but the subject-matter is too voluminous to be dealt with in this present volume.

B. RAILWAYS.

§ 1. General.

1. **Introduction.**—In the following pages statistics relating to State-owned lines are, in the main, dealt with separately from those under the control of the Commonwealth Government. The State railways are referred to throughout as " State " and the Commonwealth railways as " Federal " railways. A summary in regard to Federal and State railways will, however, be found in § 4 following.

2. **Improvement of Railway Statistics.**—Earlier issues of the Year Book contain a condensation of the report issued in 1909 by the Commonwealth Statistician to the Minister for Home Affairs on the subject of *The Desirability of Improved Statistics of Government Railways in Australia* (see Year Book No. 7, page 598).

Considerable improvement, both as regards the volume of information and the mode of presentation thereof in the statistical tables appearing in the reports of the several Railways Commissioners, has been made during recent years.

3. **Railway Communication in Australia.**—(i) *General.* An account of the progress of railway construction in Australia since the opening of the first line in 1854 will be found in Year Book No. 6, p. 681. In the eastern, south-eastern and southern parts of Australia there is now a network of railway lines converging from the various agricultural, pastoral and mining districts towards the principal ports, which are themselves connected by systems of lines running approximately parallel to the coast. In the east, lines radiating from Cairns, Townsville, Rockhampton, Brisbane and Sydney extend inland in various directions for distances ranging up to over 600 miles ; in the south-east there are numerous lines, those in Victoria converging towards Melbourne, while others in New South Wales have their terminus in Sydney ; in the south there are four main lines, with numerous branches, running from Melbourne ; while from Adelaide one main line, with several branches to the coastal towns, runs inland in a northerly direction for a distance of nearly 700 miles and another line runs in a south-easterly direction to various ports, meeting the main line from Melbourne on the border of South Australia and Victoria near Serviceton. The South Australian and Victorian railway systems also meet on the

border at two other points, one near Pinnaroo, and the other at Rennick, near Mount Gambier. In Western Australia there is a connected system of main or trunk lines between the ports of the State and the agricultural, pastoral, and mining districts, and two short lines, one on the north-west, the other on the south coast, which are unconnected with the main system. In the northern portion of Queensland there were also several disconnected lines running inland from the more important ports, but during the year 1924–25 an uninterrupted service as far north as Cairns was established. In Tasmania the principal towns are connected by a system of lines, and there are also, more especially in the western districts, several lines which have been constructed for the purpose of opening up mining districts.

By the opening, in 1917, of the Trans-Australian railway from Port Augusta to Kalgoorlie, through communication by rail was established between the eastern States and the Western Australian railway system.

(ii) *The Main Interstate Lines.* The main interstate lines, which permit of direct communication between the five capital cities—Brisbane, Sydney, Melbourne, Adelaide, and Perth—cover a distance from end to end of 3,474.80 miles or 3,479.82 miles via Newcastle. The schedule time for the journey from Brisbane to Perth is six days one hour forty-two minutes, the time being taken over all.

The longest railway journey which can be undertaken in Australia on one continuous line of railway is from Dajarra in Queensland to Meekatharra in Western Australia, a total distance of approximately 5,500 miles.

4. Non-conformity of Gauge.—(i) *General.* With but few exceptions, all the railway lines in Australia open for general traffic are now owned and managed by the respective States in whose territory they run, or by the Commonwealth Government; but, unfortunately, for the purpose of interstate traffic the construction of the various systems in different parts of Australia has proceeded without uniformity of gauge. A statement giving the reasons for the adoption of the various gauges in the several States appeared in Year Book No. 15, p. 534, but considerations of space preclude its repetition in the present issue.

(ii) *Interstate Junctions.* Connexions at border stations were established as follows:—Victoria and New South Wales, at Albury, 14th June, 1883; Victoria and South Australia, at Serviceton, 19th January, 1887; and New South Wales and Queensland, at Wallangarra, 16th January, 1888. Through trains were unable to run on this latter section until the completion of the Hawkesbury River Bridge on 1st May, 1889. On the 22nd October, 1917, through communication from east to west was made possible by the opening of the Trans-Australian line.

(iii) *Proposals for Unification.* The question of the unification of gauges in the several States has been under consideration for several years, and numerous conferences on the subject have been held from time to time between the several Railways Commissioners and between the Premiers of the States concerned. Reference to these conferences has been made in previous issues of the Year Book.

Some advancement, however, has been made in this connexion by the commencement of a 4 ft. 8½ in. gauge line between Kyogle (New South Wales) and South Brisbane (Queensland), which, when completed, will establish uninterrupted standard gauge communication between Sydney and South Brisbane. The mileage involved in this project is 87.12 miles, of which 60.56 miles is in Queensland Territory. The construction of this line is under the control of a Council, consisting of the Commonwealth Railways Commissioner, the Chief Railway Commissioner for New South Wales, and the Commissioner for Railways, Queensland.

The following further proposals for modifying the disadvantages attending the multiplicity of gauges have been recommended to and accepted by Parliament by the Commonwealth Parliamentary Standing Committee on Public Works:—

(*a*) Extension of the Trans-Australian Railway from Port Augusta to Red Hill, 83 miles of 4 ft. 8½ in. gauge at the expense of the Commonwealth Government, which will at the expense of the South Australian Government lay a third rail to conform to the South Australian gauge of 5 ft. 3 in. from a point near Port Pirie to Red Hill; and (*b*) Laying of a third rail from Red Hill to Adelaide by the South Australian Government at the expense of the Commonwealth Government to provide a railway of 4 ft. 8½ in. gauge over the existing 5 ft. 3 in. gauge line from Red Hill to Adelaide, a total distance of approximately 107 miles.

When these proposals are completed, through passengers over the Trans-Australian line will not need to change at Port Augusta and Terowie.

(iv) *Estimated Cost of Unification of Gauges.* The scheme recommended by the Royal Commission of 8th February, 1921, and adopted by the Prime Minister and Premiers of the several States in conference during November of the same year, as the first step, will provide a standard 4 ft. 8½ in. gauge railway between Brisbane and Fremantle, and the conversion of the whole of the broad-gauge lines of Victoria and South Australia, at an estimated cost of £21,600,000, spread over a period of approximately eight years The details of the estimate of £21,600,000, which provides for a main trunk line between Fremantle and Brisbane, and the conversion of the 5 ft. 3 in. gauge lines in Victoria and South Australia, together with the quota from each State and the Commonwealth Government in terms of the allocation of cost agreed upon, were given in a previous issue (see Year Book No. 16, p. 278).

The estimated cost of converting the whole of the lines in the States concerned was given as approximately £57,200,000.

5. Rolling Stock Gauges.—Allied to the question of the gauges of the railways of Australia is that of the rolling stock gauges in use, the rolling stock gauge being the maximum transverse dimensions to which the rolling stock may be constructed. Particulars in respect of such dimensions have been published in previous issues of this work. (See Official Year Book, No. 18, p. 274.)

6. Mileage Open for Traffic, all Lines.—(i) *General.* In all the States the principle that the control, construction, and maintenance of the railways should be in the hands of the Government has long been adhered to, excepting in cases presenting unusual circumstances. In various parts of Australia, lines have been constructed and managed by private companies, but at the present time nearly the whole of the railway traffic is in the hands of the State or Commonwealth Governments. A large proportion of the private lines has been laid down for the purpose of opening up forest lands, mining districts, or sugar areas, and these lines are not generally used for the conveyance of passengers or the public conveyance of goods. (See § 5 *Private Railways*, hereinafter.)

The subjoined table shows the route mileage of Federal, State, and private lines open for traffic (exclusive of sidings and cross-overs) in each State for each of the years 1922–23 to 1926–27. The railway mileage given for each State includes both Federal, State, and private railways in that State :—

RAILWAYS.—GOVERNMENT AND PRIVATE.—MILEAGE OPEN, 1923 TO 1927.

State or Territory.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	Miles.	Miles.	Miles.	Miles.	Miles.
New South Wales ..	5,689.18	5,847.13	5,986.39	6,072.46	6,080.68
Victoria	4,393.48	4,496.34	4,542.45	4,687.68	4,704.63
Queensland	7,180.10	7,341.83	7,433.46	7,576.32	7,711.77
South Australia	3,503.40	3,577.01	3,577.01	3,624.41	3,659.49
Western Australia ..	4,844.93	4,908.77	5,040.65	5,202.23	5,244.13
Tasmania	896.36	908.38	904.08	1,072.41	1,062.26
Federal Capital Territory ..	4.94	4.94	4.94	4.94	4.94
Northern Territory ..	198.68	198.68	198.68	198.68	198.68
Australia	26,711.07	27,283.08	27,687.66	28,439.13	28,666.58

In previous issues of the Year Book particulars were given for different periods from 1855 onwards. (See No. 15, p. 537.)

(ii) *Government and Private Lines Separately.* The next table shows for each State (*a*) the length of lines owned by the State Government, and by the Commonwealth Government in that State, all of which lines are open for general use by the public, (*b*) the length of private lines available for general use by the public, and (*c*) the length of the private lines not so available. The mileages specified in the case of Government and private lines are to the 30th June, 1927 :—

RAILWAYS.—GOVERNMENT AND PRIVATE.—MILEAGE CLASSIFIED, 1926-27.

State or Territory.	Government Lines— State.	Government Lines— Federal.	Private Lines available for General Traffic.	Total Open for General Traffic.	Private Lines used for special Purposes only.	Grand Total.
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
New South Wales	5,750.04	..	142.03	5,892.07	188.61	6,080.68
Victoria ..	4,634.22	..	24.94	4,659.16	45.47	4,704.63
Queensland ..	6,301.57	..	302.02	6,603.59	1,108.18	7,711.77
South Australia ..	2,527.80	1,075.41	33.80	3,637.01	22.48	3,659.49
Western Australia	3,918.05	453.99	277.00	4,649.04	595.09	5,244.13
Tasmania ..	658.25	..	187.61	845.86	216.40	1,062.26
Federal Capital Territory ..	..	4.94	..	4.94	..	4.94
Northern Territory	..	198.68	..	198.68	..	198.68
Australia ..	23,789.93	1,733.02	967.40	26,490.35	2,176.23	28,666.58

7. **Comparative Railway Facilities.**—The mileage of line open to the public for general traffic (including both Government and private lines) is shown in the subjoined statement in relation to population and area respectively :—

RAILWAYS.—GOVERNMENT AND PRIVATE.—COMPARISON OF FACILITIES, 1927.

Particulars.	N.S.W.	Vic.	Q'ld.	S.A.	W.A.	Tas.	Fed. Cap. Ter.	Nor. Ter.	Aust.
Mileage of Railway—									
Per 1,000 of population ..	2.56	2.73	8.62	6.41	13.62	5.10	0.65	46.64	4.65
Per 1,000 sq. miles or Territory ..	19.65	53.53	11.50	9.63	5.37	40.52	5.26	0.38	9.64

8. **Classification of Lines according to Gauge, 1926-27.**—The next table gives a classification, according to gauge, of the total mileage, exclusive of sidings and crossovers, of (i) Federal railways, given in the State or Territory in which situated ; (ii) State railways ; (iii) Private railways open to the public for general traffic ; and (iv) Private lines open for special purposes. Particulars of Government railways are up to the 30th June, 1927; of private railways open for general traffic, to the 31st December, 1927, as nearly as possible ; and of private railways open for special purposes to the 30th June, 1927.

RAILWAYS.—GOVERNMENT AND PRIVATE.—GAUGES, 1926-27.

State or Territory in which situated.	Route mileage having a gauge of—								Total.
	5 ft. 3 in.	4 ft. 8½ in.	3 ft. 6 in.	3 ft. 0 in.	2 ft. 6 in.	2 ft. 3 in.	2 ft. 0 in.	1 ft. 8 in.	
FEDERAL RAILWAYS.									
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
South Australia ..	..	597.46	477.95	..	..	..	..	..	1,075.41
Western Australia ..	..	453.99	..	..	..	..	..	..	453.99
Federal Capital Territory	..	4.94	..	..	..	..	..	..	4.94
Northern Territory	..	..	198.68	..	..	..	..	..	198.68
Total ..	..	1,056.39	676.63	..	..	..	..	..	1,733.02
STATE RAILWAYS.									
New South Wales ..	..	5,710.53	39.51	..	..	..	..	..	5,750.04
Victoria	4,512.45	..	..	..	121.77	..	..	..	4,634.22
Queensland ..	..	..	6,271.31	..	..	..	30.26	..	6,301.57
South Australia ..	1,244.44	..	1,283.36	..	..	..	..	..	2,527.80
Western Australia ..	...	..	3,918.05	..	..	..	..	..	3,918.05
Tasmania	..	..	633.42	..	..	..	24.83	..	658.25
Total ..	5,756.89	5,710.53	12,145.65	..	121.77	..	55.09	..	23,789.93
PRIVATE RAILWAYS OPEN FOR GENERAL TRAFFIC.									
New South Wales ..	..	78.97	36.73	..	..	..	26.33	..	142.03
Victoria	13.94	..	..	11.00	..	..	..	..	24.94
Queensland ..	..	..	124.22	..	7.00	..	170.80	..	302.02
South Australia ..	..	..	33.80	..	..	..	..	..	33.80
Western Australia ..	..	..	277.00	..	..	..	..	..	277.00
Tasmania	..	...	171.12	..	..	..	16.49	..	187.61
Total ..	13.94	78.97	642.87	11.00	7.00	..	213.62	..	967.40
PRIVATE RAILWAYS OPEN FOR SPECIAL PURPOSES.									
New South Wales ..	..	174.99	3.44	..	..	..	10.18	..	188.61
Victoria	18.37	..	10.00	4.50	..	..	12.60	..	45.47
Queensland ..	..	..	245.16	..	..	..	863.02	..	1,108.18
South Australia ..	..	..	..	6.38	2.00	3.75	10.35	..	22.48
Western Australia ..	..	..	543.84	..	..	..	13.75	37.50	595.09
Tasmania	..	11.25	122.64	5.98	35.52	..	41.01	..	216.40
Total ..	18.37	186.24	925.08	16.86	37.52	3.75	950.91	37.50	2,176.23
ALL RAILWAYS.									
New South Wales ..	..	5,964.49	79.68	..	..	..	36.51	..	6,080.68
Victoria	4,544.76	..	10.00	15.50	121.77	..	12.60	..	4,704.63
Queensland ..	..	..	6,640.69	..	7.00	..	1,064.08	..	7,711.77
South Australia ..	1,244.44	597.46	1,795.11	6.38	2.00	3.75	10.35	..	3,659.49
Western Australia ..	..	453.99	4,738.89	..	..	..	13.75	37.50	5,244.13
Tasmania	..	11.25	927.18	5.98	35.52	..	82.33	..	1,062.26
Federal Capital Territory	..	4.94	..	..	..	..	..	..	4.94
Northern Territory ..	..	..	198.68	..	..	..	..	..	198.68
GRAND TOTAL	5,789.20	7,032.13	14,390.23	27.86	166.29	3.75	1,219.62	37.50	28,666.58

§ 2. Federal Railways.

1. **General.**—On the 1st January, 1911, the Commonwealth Government took over the Northern Territory from the South Australian Government, and at the same time the railways from Darwin to Pine Creek in the Northern Territory, and from Port Augusta to Oodnadatta in South Australia, came under its control. Subsequently the construction of a transcontinental line from Port Augusta in South Australia to Kalgoorlie in Western Australia was undertaken by the Commonwealth Government, while a line has been constructed in the Federal Capital Territory, connecting Canberra with the New South Wales railway system at Queanbeyan. In 1917 an Act was passed by which all the Federal railways were vested in a Commonwealth Railways Commissioner.

2. **Northern Territory Railway.**—(i) *Darwin to Katherine.* On the 1st January, 1911, the line from Darwin to Pine Creek came under the jurisdiction of the then Department of External Affairs, and was worked under the Administrator of the Northern Territory. As mentioned above, the management of this railway is now vested in the Commonwealth Railways Commissioner.

In the Northern Territory Acceptance Act the construction of a transcontinental line from South Australia is provided for. The extension of the line from Pine Creek to Katherine River was completed, and the first train ran through to Emungalan (Katherine River) on 13th May, 1917.

(ii) *Proposed Extension.* The recommendations of the Parliamentary Standing Committee on Public Works in connexion with the North-South line were indicated in a previous issue of this work. (See Year Book No. 18, p. 278.)

(iii) *Line Authorized for Construction.* The Northern Territory Railway Extension Act 1923 provides for the construction of a 3 ft. 6 in. gauge line from the present terminus at Emungalan to Daly Waters, a distance of approximately 160 miles. The estimated cost of this line is £1,545,000, including the cost of a bridge over the Katherine River which was completed in May, 1926, although the first train crossed on 21st January, 1926. The terminus of the line was moved to the new station at Katherine River on 14th December, 1926, and at the 30th June, 1927, the rails had been laid a further distance of 29 miles from the Katherine River station towards Daly Waters.

3. **Port Augusta to Oodnadatta Railway.**—(i) *General.* This line was taken over by the Commonwealth Government from 1st January, 1911, but was held under lease by the South Australian Government until 31st December, 1913. From the 1st January, 1914, the line was worked under agreement by the South Australian Government for and on behalf of the Commonwealth, but from 1st January, 1926, the management devolved upon the Commonwealth Railways Commissioner.

(ii) *Extension Authorized.* The Railways (South Australia) Agreement Act 1926, assented to by the Commonwealth Parliament in February, 1926, ratified the agreement between the Commonwealth and South Australian Governments for the construction of a 3 ft. 6 in. gauge line between Port Augusta and Alice Springs. This involves the construction of an extension to Alice Springs of the existing 3 ft. 6 in. gauge line from Port Augusta to Oodnadatta. The estimated cost, exclusive of rolling stock, of the proposed extension, which comprises 292 miles, is £1,700,000. The permanent survey of the line has been completed, and, at 30th June, 1927, 14½ miles of the line were laid. The remainder of the first section 21¼ miles from Oodnadatta has since been completed, and the contract for the construction of the balance of 270¾ miles to Alice Springs was signed on the 11th August, 1927.

4. **Federal Capital Territory Railway—Queanbeyan-Canberra.**—This line was built by the Railway Construction Branch of the Public Works Department, New South Wales, and, when completed, was taken over by the Chief Commissioner of Railways for that State, who worked the line for and on behalf of the Commonwealth Government until 1st July 1928, on which date the management was taken over by the Commonwealth Railways Commissioner. The line was opened for departmental goods traffic on 25th May, 1914. It connects with the New South Wales railway system at Queanbeyan, is 4.94 miles in length, and has sidings of an aggregate length of 2.00 miles.

5. **Trans-Australian Railway (Kalgoorlie to Port Augusta).**—In the issue of the Year Book for 1918 (No. 11, pp. 663 to 666 and p. 1213), a short history of the construction of the Trans-Australian line is given, also a description of the country through which the line passes between Kalgoorlie and Port Augusta.

On the 22nd October, 1917, the first through train left Port Augusta with an official party on board for Kalgoorlie. It should be mentioned that owing to deviations from the original route, the length of this line was reduced from 1,063.39 miles to 1,051.45 miles, a saving of 11.94 miles.

6. **Lines Open, Surveyed, etc.**—The following table shows the lines open for traffic under the control of the Commonwealth Government at 30th June, 1927, together with the lines which have been or are being surveyed :—

RAILWAYS, FEDERAL, 30th JUNE, 1927.

Terminals.	Miles.
OPEN FOR TRAFFIC.	
Trans-Australian—Port Augusta (South Australia) to Kalgoorlie (Western Australia)	1,051.45
Central Australia Railway—Port Augusta to Oodnadatta (South Australia)	477.95
Queanbeyan to Canberra (Federal Capital Territory)	4.94
North Australia Railway—Darwin to Emungalan, Katherine River ..	198.68
Total opened for traffic	1,733.02
SURVEYED OR BEING SURVEYED.	
Katherine River to Mataranka (Northern Territory)	65.44
Mataranka to Daly Waters (Northern Territory)	95.00
Kingoonya to Boorthanna (South Australia)	176.44
Oodnadatta to Alice Springs	115.00
Canberra to Jervis Bay (Federal Capital Territory)	140.22
Canberra (Federal Capital Territory) to Federal Capital Territory Border in the direction of Yass (New South Wales)	11.67
Daly Waters (Northern Territory) to Oodnadatta (South Australia) ..	851.50
Port Augusta to Crystal Brook (South Australia)	69.25
Total surveyed or being surveyed	1,524.52

In addition, a trial survey from the proposed deep water port at Rocky Island (Gulf of Carpentaria) to Borroloola has been completed in connexion with the possibility of developing a port at the mouth of the McArthur River.

7. **Mileage open, worked, and Train miles run.**—The next table shows the length of the Federal railways open for traffic, average miles worked, and the train miles run in the years 1923 to 1927 :—

RAILWAYS, FEDERAL.—MILEAGE OPEN, WORKED, AND TRAIN MILES, 1923 TO 1927.

MILES OPEN FOR TRAFFIC.

Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Central Australia.	Federal Capital Territory.	North Australia.	
	Miles.	Miles.	Miles.	Miles.	Miles.
1923	1,051	478	5	199	1,733
1924	1,051	478	5	199	1,733
1925	1,051	478	5	199	1,733
1926	1,051	478	5	199	1,733
1927	1,051	478	5	199	1,733

RAILWAYS, FEDERAL.—MILEAGE OPEN, WORKED, AND TRAIN MILES, 1923 TO 1927—*continued.*

Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Central Australia.	Federal Capital Territory.	North Australia.	
	AVERAGE MILES WORKED.				
	Miles.	Miles.	Miles.	Miles.	Miles.
1923	1,051	478	5	199	1,733
1924	1,051	478	5	199	1,733
1925	1,051	478	5	199	1,733
1926	1,051	478	5	199	1,733
1927	1,051	478	5	199	1,733
	TRAIN MILES RUN.				
1923	449,609	303,187	1,065	20,823	774,684
1924	453,742	293,529	4,731	18,412	770,414
1925 (*a*) ..	472,459	283,762	5,999	51,279	813,499
1926 (*a*) ..	471,322	192,773	7,123	60,641	731,859
1927 (*a*) ..	487,160	263,227	12,402	69,872	832,661

(*a*) Traffic Train Mileage (exclusive of "Assistant" and "Light" mileages).

8. **Cost of Construction and Equipment.**—In the following table particulars are given of the cost of construction and equipment for traffic of the undermentioned railways for each of the years 1923 to 1927 :—

RAILWAYS, FEDERAL.—CAPITAL COST, 1923 TO 1927.

Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Central Australia.	Federal Capital Territory. (*b*)	North Australia.	
	TOTAL COST OF CONSTRUCTION AND EQUIPMENT OF LINES OPEN.				
	£	£	£	£	£
1923	7,301,433	*a*2,309,136	48,144	1,725,666	11,384,379
1924	7,379,785	*a*2,342,490	50,720	1,726,877	11,499,872
1925	7,435,771	*a*2,554,068	50,720	1,727,412	11,767,971
1926	7,515,553	2,663,099	50,974	1,736,360	11,965,986
1927	7,614,277	2,854,801	82,945	1,750,772	12,302,795
	COST PER MILE OPEN.				
1923	6,944	*a*4,831	9,746	8,686	6,569
1924	7,019	*a*4,901	10,267	8,692	6,636
1925	7,072	*a*5,345	10,267	8,694	6,790
1926	7,148	5,572	10,318	8,739	6,905
1927	7,242	5,973	13,964	8,812	7,099

(*a*) Exclusive of Rolling Stock the property of South Australian Government Railways.
(*b*) Exclusive of Rolling Stock the property of New South Wales Government Railways.

The sum of £1,533,027 of which £109,990 was for surveys, etc., has been provided from revenue for capital purposes to 30th June, 1927, and has been included in the total shown above.

9. **Gross Revenue.**—(i) *Total, per average mile worked, and per train mile run.* The following table shows the total revenue from all sources, the revenue per average mile worked, and the revenue per train mile run for each of the undermentioned railways for the financial years 1923 to 1927 inclusive :—

RAILWAYS, FEDERAL.—GROSS REVENUE, TOTAL, ETC., 1923 TO 1927.

Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Central Australia.	Federal Capital Territory.	North Australia.	
TOTAL GROSS REVENUE.					
	£	£	£	£	£
1923	208,925	108,770	2,883	15,835	336,413
1924	227,420	105,124	4,080	16,802	353,426
1925	256,647	110,256	7,029	35,180	409,112
1926	276,430	82,649	11,665	41,347	412,091
1927	303,212	125,039	14,739	55,718	498,708
GROSS REVENUE PER AVERAGE MILE WORKED.					
1923	199	228	584	80	194
1924	216	220	826	85	204
1925	244	231	1,423	177	236
1926	263	173	2,363	208	238
1927	288	262	2,985	280	288
GROSS REVENUE PER TRAIN-MILE RUN.					
	d.	*d.*	*d.*	*d.*	*d.*
1923	111.52	86.10	649.69	182.51	104.22
1924	120.29	87.96	220.04	219.01	111.16
1925	130.37	93.25	281.20	164.65	120.69
1926	140.67	101.68	383.98	160.57	134.41
1927	149.36	114.00	285.22	191.38	143.73

(ii) *Classification and Percentages.* The gross revenue is composed of (*a*) receipts from coaching traffic, including the carriage of mails, horses, parcels, etc., by passenger trains; (*b*) receipts from the carriage of goods and live stock; and (*c*) rents and miscellaneous items. The subjoined table shows the gross revenue for 1923 to 1927 classified according to the three chief sources of receipts, together with their percentages on the total revenue. The totals of the three items are given in the preceding table.

RAILWAYS, FEDERAL.—RECEIPTS, VARIOUS SOURCES, 1923 TO 1927.

Year ended 30th June—	Railway.								Total.	
	Trans-Australian.		Central Australia.		Federal Capital Territory.		North Australia.			
	Total.	Per Cent.	Total.	Per Cent.	Total.	Per Cent.	Total.	Per Cent.	Total.	Per Cent.
COACHING TRAFFIC RECEIPTS.										
	£	%	£	%	£	%	£	%	£	%
1923 ..	138,304	66.20	17,927	16.48	47	1.63	397	2.51	156,675	46.57
1924 ..	144,352	63.48	17,764	16.90	754	18.48	2,778	16.53	165,648	46.87
1925 ..	157,173	61.24	18,732	16.99	2,228	31 70	3,367	9.57	181,500	44.36
1926 ..	172,371	62.35	20,418	24.72	3,144	26.95	3,852	9.31	199,785	48.48
1927 ..	178,695	58.93	20,402	16.32	3,760	25.51	5,595	10.04	208,452	41.80
GOODS AND LIVE STOCK RECEIPTS.										
1923 ..	31,005	14.84	87,552	80.49	2,819	97.78	7,168	45.23	128,539	38.21
1924 ..	34.486	15.16	84,278	80.17	3,326	81.52	6,141	36.55	128,231	36.29
1925 ..	53,313	20.77	88,544	80.31	4,801	68.30	19,359	55.03	166,017	40.58
1926 ..	51,370	18.59	58,479	70.74	8,521	73.05	22,886	55.36	141,256	34.28
1927 ..	63,947	21.09	103,407	82.70	10,979	74.49	25,777	46.26	204,110	40.93
MISCELLANEOUS RECEIPTS.										
1923 ..	39,616	18.96	3,291	3.03	20	1.08	8,275	52.26	51,199	15.22
1924 ..	48.582	21.36	3.082	2.93	17	0.59	7.883	46.92	59,547	16.84
1925 ..	46,161	17.99	2,980	2.70	..	..	12,454	35.40	61,595	15.06
1926 ..	52,689	19.06	3,752	4.54	..	..	14,609	35.33	71,050	17.24
1927 ..	60,570	19.98	1,230	0.98	..	..	24,346	43.70	86,146	17.27

The miscellaneous receipts for the year 1926–27 include an amount of £28,514, revenue from dining cars and refreshment services on the Trans-Australian Railway. A sum of £27,854 was received from this source during the previous year.

10. **Working Expenses.**—(i) *Total.* The following table shows the total working expenses, and the percentages on the corresponding gross revenues of each railway for each year from 1923 to 1927.

Details of the annual expenditure on (*a*) maintenance of ways, works and buildings, (*b*) locomotives, carriages and wagons repairs and renewals, (*c*) traffic expenses, and (*d*) compensation, general and miscellaneous charges, are given in (iii) following.

RAILWAYS, FEDERAL.—WORKING EXPENSES, TOTAL, ETC., 1923 TO 1927.

Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Central Australia.	Federal Capital Territory.	North Australia.	
			TOTAL WORKING EXPENSES.		
	£	£	£	£	£
1923	250,280	178,181	1,588	30,984	461,033
1924	265,121	176,711	3,268	30,077	475,177
1925	294,164	158,009	4,882	40,015	497,070
1926	282,999	187,835	6,946	43,240	521,020
1927	271,886	131,613	10,036	57,960	471,495
			PERCENTAGE OF WORKING EXPENSES ON REVENUE.		
	%	%	%	%	%
1923	119.79	163.81	55.08	195.67	142.83
1924	116.58	168.10	80.10	179.01	137.04
1925	114.61	143.31	69.45	113.75	134.45
1926	102.38	227.27	59.55	104.58	126.43
1927	89.67	105.25	68.09	104.02	94.53

The percentage of working expenses on revenue shows a distinct improvement during the year ended 30th June, 1927, the Federal Territory Railway, where large extraordinary expenditure in connexion with the opening of Parliament at Canberra was experienced during the year, being the only one of the four railways showing an increase. The improvement has been brought about in spite of higher prices of coal and other materials, and more liberal rates and conditions granted by the Arbitration Court, and is the result of closer supervision and control of expenditure.

(ii) *Averages.* The next table gives the working expenses per average mile worked and per train-mile run for each railway for the years 1923 to 1927 :—

RAILWAYS, FEDERAL.—WORKING EXPENSES, AVERAGES. 1923 TO 1927.

Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Central Australia.	Federal Capital Territory.	North Australia.	
			WORKING EXPENSES PER AVERAGE MILE WORKED.		
	£	£	£	£	£
1923	238	373	322	156	266
1924	252	370	662	151	274
1925	280	331	988	201	287
1926	269	393	1,406	218	301
1927	254	275	2,032	292	272
			WORKING EXPENSES PER TRAIN-MILE RUN.		
	d.	*d.*	*d.*	*d.*	*d.*
1923	133.60	141.04	357.85	357.11	142.83
1924	140.35	147.86	176.25	392.05	149.45
1925	149.43	133.64	195.31	187.29	146.65
1926	144.10	233.85	234.04	171.13	170.86
1927	133.95	120.00	194.21	199.08	135.90

(iii) *Classification and Percentages.* The subjoined table shows the distribution of working expenses among four chief heads of expenditure for the years 1923 to 1927, together with their percentages on the total working expenses which are given in 10 (i) hereinbefore :—

RAILWAYS, FEDERAL.—DISTRIBUTION OF WORKING EXPENSES, 1923 TO 1927.

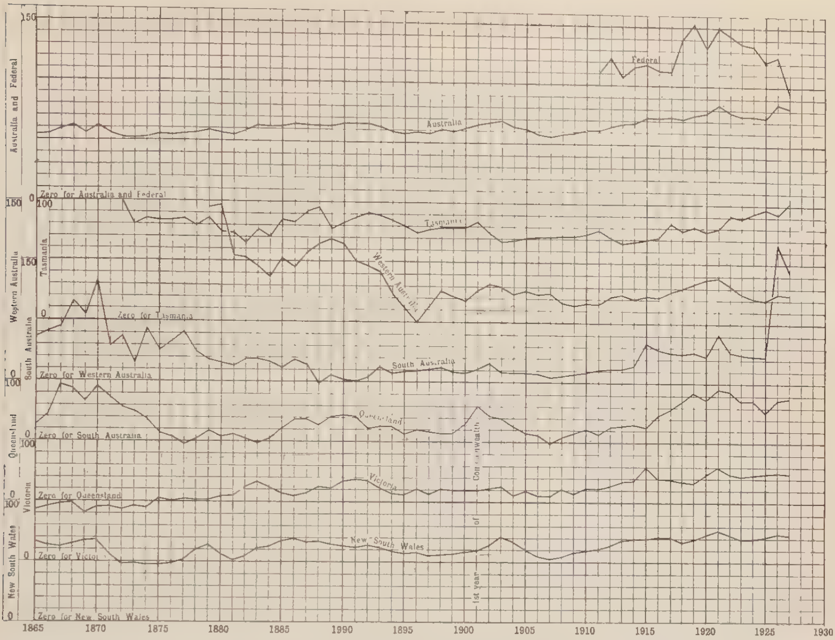
Year ended 30th June—	Railway.								Total.	
	Trans-Australian.		Central Australia.		Federal Capital Territory.		North Australia.			
	Total.	Per Cent.	Total.	Per Cent.	Total.	Per Cent.	Total.	Per Cent.	Total.	Per Cent.
					MAINTENANCE.					
	£	%	£	%	£	%	£	%	£	%
1923 ..	72,822	29.10	83,014	46.59	810	51.01	16,350	52.77	172,996	37.52
1924 ..	77,892	29.38	71,087	40.23	711	21.76	13,858	46.08	163,548	34.42
1925 ..	83,219	28.29	57,411	36.33	906	18.56	14,155	35.37	155,691	31.32
1926 ..	88,490	31.27	100,583	53.55	782	11.26	15,866	36.69	205,721	39.48
1927 ..	73,564	27.06	49,765	37.81	1,270	12.66	22,183	38.27	146,782	31.13
					LOCOMOTIVE, CARRIAGE, AND WAGON CHARGES.					
1923 ..	110,652	44.21	73,476	41.24	721	45.40	7,528	24.30	192,377	41.73
1924 ..	115,107	43.42	84,029	47.55	1,900	58.14	8,179	27.19	209,215	44.03
1925 ..	133,467	45.37	77,809	49.24	2,756	56.45	12,891	32.22	226,923	45.66
1926 ..	116,966	41.33	61,694	32.84	4,257	61.29	14,336	33.15	197,253	37.86
1927 ..	122,740	45.14	54,896	41.71	5,189	51.70	16,898	29.16	199,723	42.36
					TRAFFIC EXPENSES.					
1923 ..	37,139	14.84	18,589	10.43	57	3.59	6,481	26.92	62,266	13.51
1924 ..	39,936	15.06	18,533	10.49	657	20.10	7,346	24.42	66,472	13.99
1925 ..	41,164	14.00	19,316	12.23	1,220	24.99	11,186	27.95	72,886	14.66
1926 ..	40,927	14.46	19,994	10.65	1,907	27.45	11,784	27.26	74,612	14.32
1927 ..	42,185	15.52	20,512	15.59	3,577	35.64	17,381	29.99	83,655	17.74
					OTHER CHARGES.					
1923 ..	29,667	11.85	3,102	1.74	..	..	625	2.01	33,394	7.24
1924 ..	32,186	12.14	3,062	1.73	..	..	694	2.31	35,942	7.56
1925 ..	36,314	12.34	3,473	2.20	..	..	1,783	4.46	41,570	8.36
1926 ..	36,616	12.94	5,564	2.96	..	..	1,254	2.90	43,434	8.34
1927 ..	33,397	12.28	6,440	4.89	..	..	1,498	2.58	41,335	8.77

11. Passenger Journeys, and Tonnage of Goods and Live Stock.—(i) *General.* In the next table particulars are given of the passenger journeys and tonnage of goods and live stock carried on the Federal railways during the years 1923 to 1927 :—

RAILWAYS, FEDERAL.—TRAFFIC, 1923 TO 1927.

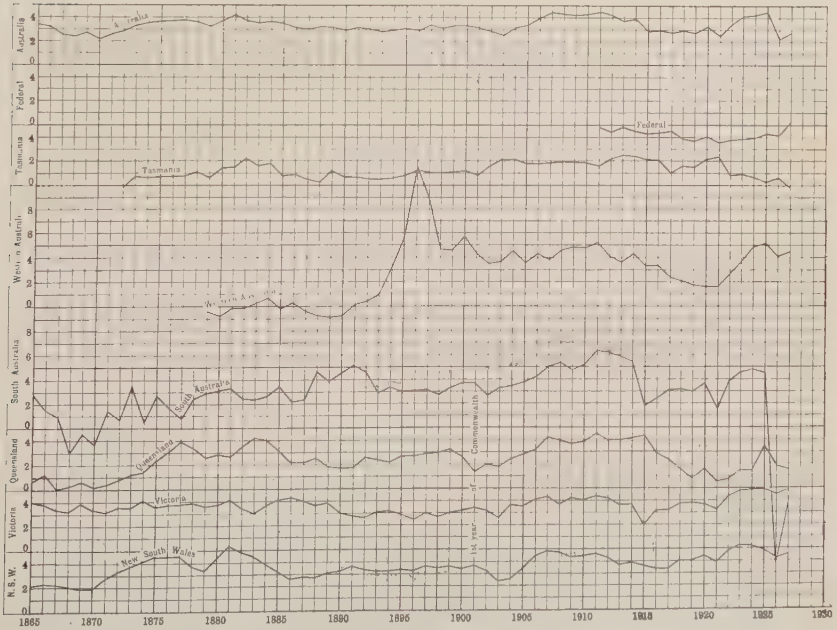
Year ended 30th June—	Railway.				Total.
	Trans-Australian.	Central Australia.	Federal Capital Territory.	North Australia.	
			PASSENGER JOURNEYS.		
	No.	No.	No.	No.	No.
1923	32,914	67,311	..	3,063	103,288
1924	31,805	67,657	32,616	3,511	135,589
1925	32,362	65,322	110,499	3,798	211,981
1926	34,512	65,250	138,923	5,293	243,978
1927	34,779	55,284	125,605	5,716	221,384
			TONNAGE OF GOODS AND LIVE STOCK CARRIED.		
	tons.	tons.	tons.	tons.	tons.
1923	33,252	72,392	14,702	2,954	123,300
1924	32,858	69,179	18,504	3,167	123,708
1925	42,225	63,622	25,405	15,259	146,511
1926	37,848	46,870	45,933	15,275	145,926
1927	43,503	81,048	84,450	15,612	224,613

PERCENTAGES OF WORKING EXPENSES ON GROSS REVENUE OF GOVERNMENT RAILWAYS, 1865 TO 1927.



Explanation.—The base of each small square represents throughout one year. The vertical side of a small square denotes throughout 10 per cent., the heavy zero lines being different for each State and Australia, with, however, the exceptions that the zero lines for Australia and Federal are identical.

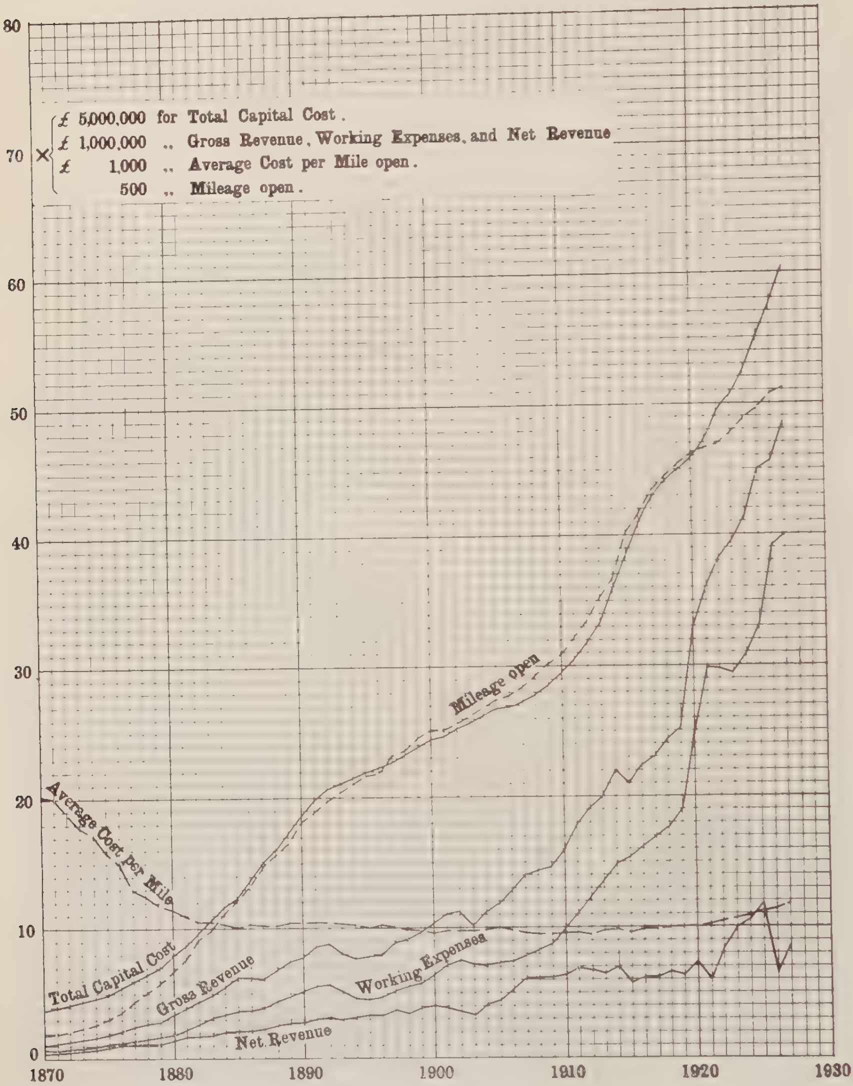
PERCENTAGES OF NET REVENUE ON CAPITAL COST OF GOVERNMENT RAILWAYS, 1865 TO 1927.



Explanation.—The base of each small square represents throughout one year. The vertical side of a small square denotes 1 per cent., the thick zero lines, however, for each State and Australia being different, but the zero line for Federal is the same as that for Australia.

Where the curve for any State falls below that State's zero line, loss is indicated, the working expenses having exceeded the gross revenue.

FINANCIAL POSITION OF THE GOVERNMENT RAILWAYS OF AUSTRALIA, 1870 TO 1927.



(See page 292.)

Explanation.—The base of each small square represents throughout one year. The significance of the vertical height of each square varies according to the nature of the several curves.

In the curve for the total capital cost, the vertical side of each square represents £5,000,000.

In the curves for (i) gross revenue, (ii) working expenses, and (iii) net revenue, the vertical side of each small square represents £1,000,000. For the curve of average cost per mile open, the vertical side of each small square represents £1,000. The mileage open is shown by a dotted curve, the vertical side of each small square representing 500 miles.

(ii) *Passenger-Mileage Summary.* The appended table gives particulars of "Passenger-Mileage" on each of the Federal railways for the year 1926–27 :—

RAILWAYS, FEDERAL.—PASSENGER-MILES SUMMARY, 1926-27.

Railway.	Passenger Train Mileage.	Number of Passenger Journeys.	Total "Passenger-Miles."	Amount Received from Passengers.	Average Number of Passengers carried per Train Mile.	Average Mileage per Passenger Journey.	Average Earnings per "Passenger-Mile."	Average Fare per Passenger Journey.	Density of Traffic per Average Mile Worked.
			,000 omitted.	£		Miles.	*d.*	£ *s.* *d.*	
Trans-Australian ..	372,517	34,779	29,871	139,869	80	859	1.12	4 0 5	28,409
Central Australia ..	46,070	55,284	2,648	15,500	57	48	1.40	0 5 7	5,541
Federal Capital Territory	7,880	125,605	494	2,732	63	4	1.33	0 0 5¼	100,115
North Australia ..	7,221	5,716	618	5,113	86	108	1.98	0 17 11	3,113

(iii) *Ton-Mileage Summary.* Particulars of ton-mileage are shown hereunder in respect of each of the Federal railways for the year 1926–27 :—

RAILWAYS, FEDERAL.—"TON-MILEAGE" SUMMARY, 1926-27.

Railway.	Goods Train Mileage.	Total Tons Carried.	Total "Ton-Miles."	Goods Earnings.	Average Freight-paying Load per Train Mile.	Average Haul per ton.	Earnings per "Ton-Mile."	Density of Traffic per Average Mile Worked.
			,000 omitted.	£	Tons.	Miles.	*d.*	
Trans-Australian ..	114,643	43,503	10,350	63,947	90	238	1.48	9,843
Central Australia ..	217,157	81,048	12,706	103,407	59	157	1.95	26,583
Federal Capital Territory	4,522	84,450	421	10,979	93	5	6.26	85,279
North Australia ..	62,651	15,612	2,702	25,777	43	173	2.29	13,601

12. Passenger Fares, Goods Rates, and Parcel Rates.—In previous issues of the Year Book particulars were included of Passenger Fares, Goods Rates (Ordinary Goods and Agricultural Produce), and Parcels Rates, but it is not proposed to republish this information herein.

13. Rolling Stock, 1927.—The following table shows the numbers of locomotives and rolling stock in use on the Federal railways, classified according to gauge :—

RAILWAYS, FEDERAL.—LOCOMOTIVES AND ROLLING STOCK, 1927.

Railway.	Gauge.		Total.	Gauge.		Total.	Gauge.		Total.
	4 ft. 8½ in.	3 ft. 6 in.		4 ft. 8½ in.	3 ft. 6 in.		4 ft. 8½ in.	3 ft. 6 in.	
	LOCOMOTIVES.			COACHING STOCK.			STOCK OTHER THAN COACHING.		
Trans-Australian	68	..	68	49	..	49	734	..	734
Central Australia	..	21	21	..	12	12	..	308	308
North Australia	..	13	13	..	12	12	..	312	312
Total ..	68	34	102	49	24	73	734	620	1,354

The Federal Capital Territory Railway was worked by the New South Wales Government Railway Department, using its own rolling stock.

14. Employees.—(i) *General.* The following table shows the number of employees on the Federal railways at 30th June in each year from 1923 to 1927 inclusive, classified according to salaried and wages staffs :—

RAILWAYS, FEDERAL.—EMPLOYEES, 1923 TO 1927.

Railway.	30th June—									
	1923.		1924.		1925.		1926.		1927.	
	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff
	No.	No.	No.	No.	No.	No.	No.	No.	No.	No.
Trans-Australian	157	852	162	761	173	906	218	870	132	811
Central Australia ..	(a)	(a)	(a)	(a)	(a)	(a)		345	66	523
North Australia ..	9	71	14	107	17	147		184	29	648
Federal Capital Territory (b) ..	..	..	..	..	..	..	..	..	..	..
Total ..	166	923	176	868	190	1,053	218	1,399	227	1,982

(a) Worked by South Australian Government Railways.
(b) Worked by New South Wales Government Railways.

Of the 227 salaried staff employed, 32 were engaged in the Construction Branch (4 on the Trans-Australian Line, 15 on the Central Australia Line, and 13 on the North Australia Line), the corresponding particulars for the wages staff being :—Trans-Australian Line 166, Central Australia Line 264, and North Australia Line 487, a total of 917 persons.

(ii) *Average Employed throughout Year.* The average number of employees throughout the year 1926–27 was 227 salaried staff (32 of whom were on construction work) and 1,750 wages staff (Construction, 697).

15. Accidents.—(i) *Classification.* The table hereunder furnishes a classification of accidents on the Federal railways during the year 1926–27 :—

RAILWAYS, FEDERAL.—ACCIDENTS, 1926-27.

Classification.	Trans-Australian.		Central Australia.		Federal Capital Territory.		North Australia.		All Federal Railways.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Train Accidents—										
Passengers	..	..	..	..	..	..	..	..	..	..
Employees	..	..	..	..	..	..	..	..	..	..
Accidents on line (other than train accidents)—										
Passengers	..	..	..	..	..	..	..	..	..	..
Employees	..	7	..	..	..	..	..	4	..	11
Other Persons	..	..	1	..	..	..	..	1	1	1
Shunting Accidents—										
Passengers	..	..	..	..	..	..	..	..	..	..
Employees	..	4	..	3	1	..	..	..	1	7
Other Persons	..	..	..	..	..	..	..	..	..	..
Employees proceeding to or from duty within the Railway boundary	..	..	..	..	..	..	..	..	..	..
Persons killed or injured at crossings	..	..	..	..	..	..	..	..	..	..
Trespassers	..	1	..	2	..	..	..	..	..	3
Miscellaneous	..	..	..	..	..	..	..	..	..	..
Total	..	12	1	5	1	..	..	5	2	22

(ii) *Particulars for Quinquennium* 1923–27. The following table shows the number of accidents in each of the years 1923 to 1927 :—

RAILWAYS, FEDERAL.—ACCIDENTS, 1923 TO 1927.

Railway.	Number of Persons.									
	Killed.					Injured.				
	1923.	1924.	1925.	1926.	1927.	1923.	1924.	1925.	1926.	1927.
Trans-Australian	1	1	..	..	..	14	9	6	6	12
Central Australia	..	..	2	1	1	7	7	3	18	5
Federal Capital Territory ..	..	..	..	..	1	..	..	..	..	..
North Australia ..	..	1	..	..	..	1	1	4	..	5
Total ..	1	2	2	1	2	22	17	13	24	22

§ 3. State Railways.

1. Administration and Control of State Railways.—The policy of Government control of the railways has been adopted in each State, and earlier issues of the Year Book (see No. 6, p. 693) contain a description of the methods adopted by the various State Governments in the control and management of their railways.

2. Mileage Open, 1923 to 1927.—(i) *General.* The following table shows the length of State railways open for traffic on the 30th June in the years 1923 to 1927 :—

RAILWAYS, STATE.—MILEAGE OPEN FOR TRAFFIC, 1923 TO 1927.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
1923	5,318	4,333	5,906	2,373	3,555	663	22,148
1924	5,523	4,434	6,040	2,452	3,629	673	22,751
1925	5,656	4,483	6,114	2,452	3,733	673	23,111
1926	5,742	4,627	6,240	2,499	3,864	673	23,645
1927	5,750	4,634	6,302	2,528	3,918	658	23,790

A graph indicating the mileage open in Australia at the end of each of the years 1870 to 1927 accompanies this chapter.

The appended statement shows the actual mileage opened for traffic in the year 1927, also the annual average increase in mileage opened since 1917 in each State :—

RAILWAYS, STATE.—MILEAGE OPENED ANNUALLY.

Mileage.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
Mileage opened during 1926–27	8.22	6.95	61.53	28.70	53.70	–14.65*a*	144.45
Average annual mileage increase for 10 years to 30th June, 1927 ..	131.30	51.16	108.78	30.71	49.29	7.66	378.90

(*a*) The Sorell line was closed for traffic during the year, and no new mileage opened.

(ii) *New South Wales.* During the year ended 30th June, 1927, the following extensions and new lines were opened for traffic :—Richmond to Kurrajong (6.98 miles) and Sydney Central Station to St. James, underground electric railway (1.24 miles), making a total for the year of 8.22 miles.

(iii) *Victoria.* Readjustments to existing lines and the opening of the Goroke to Morea (Carpolac) Line (9.05 miles) increased the mileage for the year 1926–27 by 6.95 miles.

(iv) *Queensland.* During 1926–27, 61.53 miles of new lines were opened for traffic, viz. :—Ceratodus to Mulgeldie (26.16 miles); Many Peaks to Barrimoon (14.55 miles); Nipan to Theodore (13.72 miles); and Mount Molloy to Rumula (7.10 miles).

(v) *South Australia.* During the year 1926–27, 6.53 miles of 5 ft. 3 in. gauge (Paringa to Renmark 1.99 miles, and Bumbunga to Lochiel 4.54 miles), and 22.17 miles (Kimba to Buckleboo) of 3 ft. 6in. gauge were opened for traffic, making a total increase for the year of 28.70 miles.

(vi) *Western Australia.* The following new mileage was opened for traffic during the year :—Dwarda to Narrogin (37.01 miles), and Jardee to Pemberton (16.69 miles), making a total increase for the year of 53.70 miles.

(vii) *Tasmania.* No new extensions were opened during the year. The Sorell line (Bellerive to Sorell), 14.65 miles, was closed for traffic on 1st July, 1926.

3. Length and Gauge of Railway Systems in each State.—In all the States the Government railways are grouped, for the convenience of administration and management, into several divisions or systems. A summary showing concisely the gauge and length of the main and branch lines included in each division or system in the different States for the year ended 30th June, 1927, is given in the Transport and Communication Bulletin No. 19 issued by this Bureau.

4. Average Mileage Worked and Train-Miles Run.—The total mileage open for traffic at the end of each financial year has been given previously, but, in considering the returns relating to revenue and expenditure and other matters, it is desirable to know the average number of miles actually worked during each year. The next table shows the average number of miles worked and the total number of train-miles run by the Government railways of each State during the years 1923 to 1927 inclusive :—

RAILWAYS, STATE.—MILEAGE WORKED AND MILES RUN, 1923 TO 1927.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
			AVERAGE MILEAGE WORKED.				
1923 ..	5,197	4,314	5,868	2,359	3,552	663	21,953
1924 ..	5,460	4,369	5,960	2,416	3,593	668	22,466
1925 ..	5,571	4,448	6,078	2,452	3,669	673	22,891
1926 ..	5,722	4,526	6,145	2,491	3,837	673	23,394
1927 ..	5,747	4,627	6,259	2,523	3,906	658	23,720
			TRAIN-MILES RUN.				
1923 ..	21,693,861	16,394,239	10,917,584	5,792,798	4,505,299	1,434,816	60,738,597
1924 ..	23,755,897	17,244,507	11,647,077	6,791,620	4,839,285	1,416,216	65,694,602
1925 (*a*) ..	23,304,916	17,482,006	12,107,995	6,653,248	4,843,304	1,358,980	65,750,449
1926 (*a*) ..	24,624,995	17,575,547	12,866,323	6,846,149	4,862,505	1,342,475	68,117,994
1927 (*a*) ..	26,325,847	18,030,749	11,905,663	6,959,734	5,273,894	1,303,023	69,798,910

(*a*) Traffic Train Miles (exclusive of " Assistant " and " Light " mileages).

The particulars of train-miles run given in the foregoing table are not strictly comparable over the quinquennium owing to the fact that " assistant " and " light " mileages have been excluded for the years 1924–25 to 1926–27.

5. Lines under Construction, and Lines Authorized, 1927.—(i) *General.* The following statement gives particulars up to the 30th June, 1927, of the mileage of State railways *a*) under construction, and (*b*) authorized for construction but not commenced :—

RAILWAYS, STATE.—MILEAGE UNDER CONSTRUCTION AND AUTHORIZED, 30th JUNE, 1927.

Particulars.	N.S.W.	Vic. (a)	Q'land.	S.A.	W.A.	Tas.	All States.
Mileage under construction	274.83	(b)67.75	253.00	20.25	93.50	..	709.33
Mileage authorized but not commenced ..	408.57	103.25	1,165.00	26.25	467.00	..	2,170.07

(a) See sub-section (b) below.
(b) Exclusive of 186 miles on which work has been suspended.

(ii) *Lines under Construction.* In spite of the great extensions of State railways since the year 1875, there are still, in some of the States, immense areas of country which are as yet practically undeveloped, and in which little in the nature of permanent settlement has been accomplished. The general policy of the States is to extend the existing lines inland in the form of light railways as settlement increases, and while it is true that lines which were not likely to be commercially successful in the immediate future have been constructed from time to time for the purpose of encouraging settlement, the general principle that the railways should be self-supporting is kept in view.

(a) *New South Wales.* The total mileage under construction was 274.83 miles, consisting of the following lines:—Ivanhoe to Menindie (117.44 miles); Booyong to Ballina (12.79 miles); Uranquinty towards Moon's Siding (28.33 miles); Ungarie to Naradhan (38.09 miles); Kyogle to Richmond Gap (26.66 miles); Regent's Park to Bankstown (2.35 miles); Moss Vale to Port Kembla (38.08 miles); and City and Suburban Railway (11.09 miles).

(b) *Victoria.* In this State 29.75 miles of 5 ft. 3 in. gauge lines are being constructed, viz.:—Marnoo to Wallaloo (6.50 miles); Bowser to Peechelba (12.25 miles); South Kensington to West Footscray (2.50 miles); and Albion to Broadmeadows (8.50 miles). The Border Railways Act 1922 (Vic. 3194) provides for the construction of 38 miles in New South Wales Territory, viz.:—Gonn Crossing to Stony Crossing. On completion this line, which is of 5 ft. 3 in. gauge, will be taken over and operated by the Victorian Railways Commissioners.

(c) *Queensland.* In previous issues of the Year Book details were given of the scheme of railway construction under the provisions of the North Coast Railway Act 1910 (see Year Book No. 15, p. 551). On the 30th June, 1927, the following lines, of an aggregate length of 253 miles, were under construction:—Southern Division—4 ft. 8½ in. gauge—South Richmond to Richmond Gap (68 miles); 3 ft. 6 in. gauge—Hannaford towards Surat (25 miles); and Mulgeldie to Monto (8 miles). Central Division—Barrimoon to Monto (30 miles); and Morella to Winton (68 miles). Northern Division—Duchess to Mount Isa (54 miles). The following lines are partially constructed, but work thereon is temporarily suspended:—Wallaville to Kalliwa Creek (18 miles); Yaraka to Powell's Creek (27 miles); Dajarra to Moonah Creek (41 miles); Thangool to Monto (63 miles); and Winton to 37-Mile (37 miles); a total of 186 miles.

(d) *South Australia.* The construction of the following line was in progress at 30th June, 1927:—5 ft. 3 in. gauge—Renmark to Barmera (20.25 miles). The conversion to 5 ft. 3 in. gauge of the Western system (3 ft. 6 in. gauge), about 206 miles, is in hand, and nearing completion.

(e) *Western Australia.* The following lines were in course of construction by the Public Works Department on the 30th June, 1927:—Norseman to Salmon Gums (58.50 miles); and Albany to Denmark Railway Extension (35 miles); a total of 93.50 miles.

(f) *Tasmania.* At 30th June, 1927, no railway construction work was in progress.

(iii) *Lines Authorized for Construction.* (a) *New South Wales.* At the 30th June, 1927, the following lines had been authorized for construction but not commenced:—Gilgandra to Collie (21.51 miles); Grafton to South Grafton, with bridge over Clarence

River (2.34 miles); Camurra to Boggabilla (70 miles); Wyalong to Condobolin (33 miles); Jerilderie towards Deniliquin (25.00 miles); Rand to Bull Plain (27.55 miles); Canowindra to Gregra (33.87 miles); Tempe to East Hills (7.72 miles); St. Leonards to Eastwood (9.07 miles); Sandy Hollow, via Gulgong to Maryvale (146.5 miles); and Inverell to Ashford (32 miles); a total distance of 408.57 miles.

(*b*) *Victoria.* The following lines were authorized, but construction had not been commenced up to the end of June, 1927:—5 ft. 3 in. gauge: La La Siding to Big Pat's Creek (2.50 miles); Darling to Glen Waverley (5.75 miles); and Orbost to Brodribb (6 miles). Under the Border Railways Act 1922, the following lines have been approved for construction in New South Wales territory:—Yarrawonga (Victoria) to Oaklands (New South Wales) (37 miles); Euston (New South Wales) to Benanee and beyond (New South Wales) (30 miles); and Gol Gol Extension (22 miles); an aggregate distance of 103.25 miles.

(*c*) *Queensland.* In addition to the new lines upon which work has been commenced, Parliament has authorized the construction of the following parts of the Great Western Railway—Section A, from Quilpie to Eromanga (120 miles); Section B, from Powell's Creek (224 miles); Section C, from 37-Mile to Springvale (324 miles); and Section D, from Moonah Creek (216 miles). The following lines were also authorized for construction—Inglewood to Texas and Silverspur (44 miles); Mount Edwards to Maryvale (28 miles); Lanefield to Rosevale (17 miles); Gatton to Mount Sylvia (11 miles); Wandoan to Taroom (42 miles); Dirranbandi extension (52 miles); Yarraman to Nanango (16 miles); Brooloo to Kenilworth (10 miles); Dobbyn to Myally Creek (50 miles); and Peeramon towards Boongee (11 miles); a total of 1,165 miles.

(*d*) *South Australia.* Parliament has authorized the construction of a line on the 3 ft. 6 in. gauge from Keilpa to Mangalo Hall (26.25 miles).

(*e*) *Western Australia.* The following lines were authorized for construction up to the 30th June, 1927:—Pemberton to Denmark (28 miles); Yarramony eastwards (85 miles); Brookton to Dale River (27 miles); Lake Brown to Bullfinch (50 miles); Ejanding northwards (70 miles); Boyup Brook to Cranbrook (100 miles); and Manjimup to Mount Barker (107 miles); a total distance of 467 miles.

(*f*) *Tasmania.* There were no new railways authorized on which work had not been commenced at 30th June, 1927.

6. Cost of Construction and Equipment.—(i) *General.* The total cost of construction and equipment of the State railways as distinct from those owned by the Commonwealth Government at the 30th June, 1927, amounted to £291,482,593, representing an average cost of £47.35 per head of population. If the cost of railways owned by the Commonwealth Government is included, the total capital cost (£303,785,388) is equivalent to an amount of £49.26 per head of the population of the Commonwealth, while the total mileage open (25,522.95 miles) per 1,000 of population is 4.14 miles. Particulars of the capital expenditure incurred on lines open for traffic are given in the following table:—

RAILWAYS, STATE.—MILEAGE AND COST TO 30th JUNE, 1927.

State.	Length of Line Open (Route).	Total Cost of Construction and Equipment.	Average Cost per Mile Open.	Cost per Head of Population.	Mileage per 1,000 of Population at 30th June, 1927.
	Miles.	£	£	£	Miles.
New South Wales (*a*) ..	5,750.04	111,226,149	19,344	46.92	2.43
Victoria	4,634.22	(*b*) 70,298,673	(*b*) 15,169	40.72	2.68
Queensland	6,301.57	54,496,012	8,648	60.93	7.05
South Australia (*a*) ..	2,527.80	(*c*) 28,120,046	(*c*) 11,124	49.26	4.43
Western Australia (*a*) ..	3,918.05	20,855,604	5,322	54.16	10.18
Tasmania	658.25	6,486,109	9,854	31.16	3.16
All States ..	23,789.93	291,482,593	12,252	47.35	3.87

(*a*) Exclusive of Federal railways.
(*b*) Exclusive of cost of line from Murrayville to South Australian border (12.53 miles).
(*c*) Exclusive of cost of line from Mount Gambier to Victorian border (11.67 miles).

The lowest average cost (£5,322) per mile open is in Western Australia, and the highest (£19,344) in New South Wales, as compared with an average of £12,252 for all States. There were few costly engineering difficulties in Western Australia, and the fact that contractors were permitted to carry traffic during the term of their contracts considerably reduced expenditure, particularly in respect of all goldfield contracts.

In the table above the figures relating to cost of construction and equipment do not include the discounts and flotation charges on loans allocated to the railways. This will explain the differences between the amounts shown therein for Queensland, South Australia, and Western Australia, and those shown in the Railway Reports for these States.

(ii) *Capital Cost, All Lines.* (*a*) *Total.* The increase in the total capital cost of construction and equipment of Government railways for each year from 1923 to 1927 is shown in the following table :—

RAILWAYS, STATE.—CAPITAL COST OF LINES OPEN, 1923 TO 1927.

Year ended 30th June—	N.S.W.	Victoria. (*a*)	Q'land.	S. Aust. (*b*)	W. Aust.	Tasmania.	All States. (*a*, *b*)
			TOTAL COST OF LINES OPEN.				
	£	£	£	£	£	£	£
1923 ..	87,713,871	64,615,435	44,823,991	20,234,003	18,555,115	6,199,725	242,142,140
1924 ..	91,792,167	65,880,792	47,367,439	21,410,602	18,967,443	6,374.784	251.793,227
1925 ..	98,060,216	67,136,069	49.453,595	23,637.283	19,643.517	6,416,194	264,346,874
1926 ..	103,674,668	68,888,145	51,555,649	25,529,866	20,327,456	6,450,185	276,425,969
1927 ..	111,226,149	70,298,673	54,496,012	28,120,046	20,855,604	6,486,109	291,482,593
			COST PER MILE OPEN.				
1923 ..	16,494	14,883	7,590	8,527	5,219	9,346	10,938
1924 ..	16,621	14,856	7,842	8,733	5,227	9,474	11,067
1925 ..	17,338	14,974	8,088	9,641	5,263	9,535	11,435
1926 ..	18,056	14,887	8,262	10,216	5,260	9,586	11,690
1927 ..	19,344	15,169	8,648	11,124	5,322	9,854	12,252

(*a*) Exclusive of cost of line from Murrayville to South Australian border (12.53 miles).
(*b*) Exclusive of cost of line from Mount Gambier to Victorian border (11.67 miles).

(*b*) *From Consolidated Revenue.* The following table shows the amounts provided from Consolidated Revenue for construction and equipment to 30th June, 1927 :—

RAILWAYS, STATE.—EXPENDITURE FROM CONSOLIDATED REVENUE FOR CONSTRUCTION AND EQUIPMENT TO 30th JUNE, 1927.

To 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
	£	£	£	£	£	£	£
1927 ..	659,930	4,037,566	..	1,943,512	643,158	16,935	7,301,101

(iii) *Loan Expenditure.* The subjoined table shows the total loan expenditure on Government railways (including lines both open and unopen) in each State, except Tasmania, and on Government railways and tramways in the latter State for the years 1923 to 1927 :—

RAILWAYS, STATE.—LOAN EXPENDITURE, 1923 TO 1927.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas. (*a*)	All States.
	£	£	£	£	£	£	£
1923 ..	4,177,273	1,674,643	2,134,162	659,120	519,557	254,120	9,418,875
1924 ..	2,914,722	1,395,282	2,318,205	779,441	561,988	250,514	8,220,152
1925 ..	4,246,963	1,483,720	1,741,805	2,151,329	534,103	28,638	10,186,558
1926 ..	6,060,259	1,489,285	2,826,188	2,764.511	642,854	17,255	13.800.352
1927 ..	6,229,347	1,821,005	2,470,083	2,460,555	642,225	29,824	13,653,039

(*a*) Including tramways.

The following statement shows the total loan expenditure on railways to the 30th June, 1927:—

RAILWAYS, STATE.—TOTAL LOAN EXPENDITURE TO 30th JUNE, 1927.

State ..	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.*a*	All States.
	£	£	£	£	£	£	£
Expenditure	115,513,298	69,455,840	57,345,178	28,728,256	20,810,744	6,922,406	298,775,722

(*a*) Including tramways.

7. **Gross Revenue.**—(i) *General.* The total revenue from all sources, the revenue per average mile worked, and the revenue per train-mile run during each financial year from 1923 to 1927 inclusive were as follows:—

RAILWAYS, STATE.—GROSS REVENUE, 1923 TO 1927.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
TOTAL GROSS REVENUE.							
	£	£	£	£	£	£	£
1923	15,221,333	11,347,057	5,420.400	3,710.922	2,915,985	572,417	39,188,114
1924	15,616,577	11,958,635	5,714,036	3,929,428	3,227,371	585,468	41,031,515
1925	16,769,452	12,759,197	7,109,210	4,012,736	3,359,501	548,256	44,558,352
1926	16,939,032	12,671,061	7,437,090	4,237,718	3,337.292	545,191	45,167,384
1927	18,906,543	13,652,434	7,325,677	4,062.133	3,607.989	539,352	48,094,128
GROSS REVENUE PER AVERAGE MILE WORKED.							
	£	£	£	£	£	£	£
1923	2,929	2,630	924	1,573	821	863	1,785
1924	2,860	2,737	959	1,627	898	877	1,826
1925	3,010	2,869	1,170	1,637	916	815	1,947
1926	2,960	2,798	1,210	1,701	870	810	1,930
1927	3,290	2,951	1,170	1,610	924	819	2,028
GROSS REVENUE PER TRAIN-MILE RUN.							
	d.	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*
1923	168.39	166.11	119.15	153.74	155.34	95.74	154.85
1924	173.65	172.95	125.94	152.43	167.09	101.35	160.71
1925	172.70	175.16	140.92	144.75	166.47	96.82	162.64
1926	165.09	173.03	138.73	148.56	164.72	97.47	159.14
1927	172.36	181.72	147.67	140.08	164.19	99.34	165.37

The amounts of revenue earned per average mile worked and per train-mile run in respect of (*a*) coaching and (*b*) goods and live stock traffic, separately, are given later.

(ii) *Coaching, Goods, and Miscellaneous Receipts.* (*a*) *Totals.* The gross revenue is composed of (*a*) receipts from coaching traffic, including the carriage of mails, horses, parcels, etc., by passenger trains; (*b*) receipts from the carriage of goods and live stock; and (*c*) rents and miscellaneous items. The subjoined table shows the gross revenue for 1923 to 1927, classified according to the three chief sources of receipts. The total of the three items specified has already been given in the preceding paragraph.

RAILWAYS, STATE.—COACHING, GOODS, ETC., RECEIPTS, 1923 TO 1927.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
				COACHING TRAFFIC RECEIPTS.			
	£	£	£	£	£	£	£
1923 ..	6,694,353	5,664,738	2,008,282	1,270,590	972,318	262,373	16,872,654
1924 ..	6,797,888	5,914,559	2,092,693	1,286,298	996,776	253,386	17,341,600
1925 ..	6,942,093	5,981,437	2,482,026	1,317,102	971,323	221,668	17,915,649
1926 ..	7,101,229	6,070,555	2,454,689	1,277,463	969,160	206,728	18,079,824
1927 ..	7,473,545	6,304,382	2,516,476	1,221,106	980,762	201,048	18,697,319
				GOODS AND LIVE STOCK TRAFFIC RECEIPTS.			
1923 ..	7,868,769	4,953,192	3,290,471	2,378,034	1,768,211	294,831	20,553,508
1924 ..	8,096,274	5,204,526	3,487,987	2,558,706	2,050,707	318,668	21,716,868
1925 ..	9,010,929	5,775,522	4,477,985	2,607,628	2,198,322	312,706	24,383,092
1926 ..	8,941,123	5,565,451	4,817,222	2,578,700	2,174,895	320,748	24,398,139
1927 ..	10,490,593	6,344,096	4,629,103	2,662,866	2,413,852	319,276	26,859,786
				MISCELLANEOUS RECEIPTS.			
1923 ..	658,211	729,127	121,647	62,298	175,456	15,213	1,761,952
1924 ..	722,415	839,550	133,356	84,424	179,888	13,414	1,973,047
1925 ..	816,430	1,002,238	149,199	88,006	189,856	13,882	2,259,611
1926 ..	896,680	1,035,055	165,179	381,555	193,237	17,715	2,689,421
1927 ..	942,405	1,003,956	180,098	178,161	213,375	19,028	2,537,023

The increase in miscellaneous receipts in the State of South Australia during 1925–26 was due to the inclusion of £225,242 on account of Border Railway adjustments with the State of Victoria, and £78,619 earned by Bookstalls and Refreshment Rooms which were operated departmentally for the first time.

(*b*) *Percentages.* The following table shows for the two years 1925–26 and 1926–27 the percentage which each class of receipts bears to the total gross revenue :—

RAILWAYS, STATE.—PERCENTAGES OF RECEIPTS, 1926 AND 1927.

State.	1926.			1927.		
	Coaching.	Goods and Live Stock.	Miscellaneous.	Coaching.	Goods and Live Stock.	Miscellaneous.
	%	%	%	%	%	%
New South Wales ..	41.92	52.78	5.30	39.53	55.49	4.98
Victoria	47.91	43.92	8.17	46.18	46.47	7.35
Queensland	33.01	64.77	2.22	34.35	63.19	2.46
South Australia ..	30.15	60.85	9.00	30.06	65.55	4.39
Western Australia ..	29.04	65.17	5.79	27.18	66.90	5.92
Tasmania	37.92	58.83	3.25	37.27	59.20	3.53
All States ..	40.03	54.02	5.95	38.88	55.85	5.27

(c) *Averages for Coaching Traffic Receipts.* The subjoined table shows the receipts from coaching traffic per average mile of line worked and per passenger-train-mile in each State for the year ended the 30th June, 1927 :—

RAILWAYS, STATE.—COACHING TRAFFIC RECEIPTS, AVERAGES, 1927.

State.	Number of Passenger-Train-Miles.	Coaching Traffic Receipts.		
		Gross.	Per Average Mile Worked.	Per Passenger-Train-Mile.
	No.	£	£	d.
New South Wales	15,043,747	7,473,545	1,300	119.23
Victoria	11,846,258	6,304,382	1,363	127.72
Queensland	4,210,566	2,516,476	402	143.44
South Australia	4,002,375	1,221,106	484	73.22
Western Australia	*a*2,122,285	980,762	251	110.91
Tasmania	575,377	201,048	305	83.86
All States	37,800,608	18,697,319	788	118.71

(*a*) Includes "Assistant" and "Light" Mileage.

(d) *Averages for Goods and Live Stock Traffic.* The gross receipts from goods and live stock traffic per average mile worked, per goods-train-mile, and per ton carried, for the year ended the 30th June, 1927, are given below :—

RAILWAYS, STATE.—GOODS AND LIVE-STOCK TRAFFIC RECEIPTS, AVERAGES, 1927.

State.	Number of Goods-Train-Miles.	Goods and Live-Stock Tonnage.	Goods and Live-Stock Traffic Receipts.			
			Gross.	Per Average Mile Worked.	Per Goods-Train-Mile.	Per Ton Carried.
	No.	Tons.	£	£	d.	d.
New South Wales ..	11,282,100	17,224,894	10,490,593	1,825	223.16	146.17
Victoria	6,184,491	9,234,923	6,344,096	1,371	246.19	164.87
Queensland ..	7,695,097	4,315,513	4,629,103	740	144.38	257.44
South Australia ..	2,957,359	3,671,686	2,662,866	1,056	216.10	174.06
Western Australia ..	*a*3,359,195	3,438,587	2,413,852	618	172.46	168.48
Tasmania	742,350	730,273	319,276	485	103.22	104.93
All States ..	32,220,592	38,615,876	26,859,786	1,132	200.07	166.94

(*a*) Includes "Assistant" and "Light" Mileage.

8. **Working Expenses.**—(i) *General.* In order to make an adequate comparison of the working expenses, allowance should be made for the variation of gauges and of physical and traffic conditions, not only on the railways of the different States, but also on different portions of the same system. Where traffic is light, the percentage of working expenses is naturally greater than where traffic is heavy ; and this is especially true in Australia, where ton-mile rates are in many cases based on a tapering principle—i.e., a lower rate per ton-mile is charged upon merchandise from remote interior districts—and where on many of the lines there is but little back loading.

The following table shows the total annual expenditure and the percentage thereof on gross revenue in each State for the years 1923 to 1927 :—

RAILWAYS, STATE.—WORKING EXPENSES, 1923 TO 1927.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
TOTAL WORKING EXPENSES.							
	£	£	£	£	£	£	£
1923	10,649,974	8,181,926	4,714,262	2,781,547	2,210,348	514,350	29,052,407
1924	10,917,491	8,718,394	4,990,749	2,901,298	2,297,980	552,877	30,378,789
1925	11,939,686	9,429,728	5,425,167	2,935,755	2,355,087	531,590	32,617,013
1926	12,519,993	9,548,147	6,459,792	a7,081,130	2,509,049	504,038	38,622,149
1927	13,795,853	10,193,581	6,495,322	a5,797,751	2,685,693	551,192	39,519,392

(a) See (ii) below.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
PERCENTAGE OF WORKING EXPENSES ON GROSS REVENUE.							
	%	%	%	%	%	%	%
1923	69.97	72.11	86.97	74.96	75.80	89.86	74.14
1924	69.91	72.90	87.34	73.84	71.20	94.43	74.03
1925	71.20	73.90	76.31	73.16	70.10	96.96	73.20
1926	73.91	75.35	86.86	167.10	75.18	92.45	85.51
1927	72.97	74.66	88.67	142.73	74.44	102.20	82.17

The variation in the percentage of working expenses on the gross revenue in each State for the years 1865 to 1927 is illustrated in the graph which accompanies this chapter.

(ii) *Special Expenditure.* The large increases in the working expenses in South Australia during the years 1925–26 and 1926–27 are due to amounts of £3,982,314 and £1,962,079 on account of accumulated and deferred charges being debited against the revenues for those years. This expenditure has been shown in this way in deference to the wishes of the South Australian railway authorities. Eliminating these amounts, the percentage of working expenses on gross revenue for South Australia during 1925–26 and 1926–27 would have been 73.12 per cent. and 94.43 per cent., and for all States 76.70 per cent. and 78.09 per cent., respectively.

(iii) *Averages.* The next table shows the working expenses per average mile worked and per train-mile run in each State for the years 1923 to 1927 :—

RAILWAYS, STATE.—WORKING EXPENSES, AVERAGES, 1923 TO 1927.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
WORKING EXPENSES PER AVERAGE MILE WORKED.							
	£	£	£	£	£	£	£
1923	2,049	1,896	803	1,179	622	775	1,323
1924	1,999	1,995	837	1,201	640	828	1,352
1925	2,143	2,120	893	1,197	642	799	1,425
1926	2,188	2,108	1,051	a 2,843	654	749	1,651
1927	2,401	2,203	1,038	a 2,298	688	837	1,666
WORKING EXPENSES PER TRAIN-MILE RUN.							
	d	d.	d.	d.	d.	d.	d.
1923	117.82	119.78	103.63	115.24	117.75	86.03	114.79
1924	121.40	126.08	110.00	112.55	118.97	95.71	118.99
1925	122.96	129.45	107.54	105.90	116.70	93.87	119.05
1926	122.02	130.38	120.50	a248.24	123.84	90.11	136.08
1927	125.77	135.68	130.93	a199.93	122.22	101.52	135.89

(a) See sub-section (ii) above.

(iv) *Distribution.* The subjoined table shows the distribution of working expenses, under four chief heads of expenditure, for the years 1923 to 1927 :—

RAILWAYS, STATE.—DISTRIBUTION OF WORKING EXPENSES, 1923 TO 1927.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
				MAINTENANCE.			
	£	£	£	£	£	£	£
1923	1,891,233	1,761,951	1,103,893	414,395	513,790	144,973	5,830,235
1924	1,865,096	1,861,887	1,197,992	545,987	543,387	152,359	6,166,708
1925	2,176,435	1,963,960	1,280,190	501,800	527,493	144,612	6,594,490
1926	2,001,724	1,928,597	1,513,588	a2,407,266	596,046	134,835	8,582,056
1927	2,154,931	2,276,601	1,576,325	a1,027,057	636,466	134,291	7,805,671
				LOCOMOTIVE, CARRIAGE, AND WAGON CHARGES.			
1923	5,247,980	3,482,711	2,120,267	1,579,432	1,042,751	228,308	13,701,449
1924	5,360,663	3,219,267	2,214,001	1,548,799	1,092,580	235,743	13,671,053
1925	5,772,631	3,501,911	2,459,370	1,560,923	1,124,157	223,302	14,642,294
1926	6,107,302	3,592,490	2,973,033	a3,611,130	1,157,230	218,326	17,659,511
1927	6,823,914	3,746,921	2,924,903	a3,653,050	1,244,041	222,477	18,616,206
				TRAFFIC EXPENSES.			
1923	2,806,970	2,399,867	1,400,869	722,641	592,445	117,607	8,040,399
1924	2,939,236	3,081,776	1,487,334	738,845	599,678	122,793	8,969,662
1925	3,121,001	3,228,961	1,593,347	792,762	639,193	122,374	9,497,638
1926	3,301,092	2,701,124	1,859,375	a868,171	685,898	117,246	9,622,906
1927	3,733,225	2,822,524	1,844,056	a898,459	728,466	118,987	10,145,727
				OTHER CHARGES.			
1923	703,791	537,397	89,233	65,079	61,362	23,462	1,480,324
1924	752,496	555,464	91,422	67,667	62,335	41,982	1,571,366
1925	869,619	734,896	92,260	80,270	64,244	41,302	1,882,591
1926	1,019,875	1,325,936	113,796	a194,563	69,875	33,631	2,757,676
1927	1,083,783	1,347,535	150,028	a219,185	75,820	75,437	2,951,788

(a) See sub-section (ii), page 281.

In New South Wales and Victoria the expenditure in connexion with refreshment rooms is included in " Other Charges."

9. **Net Revenue.**—(i) *Net Revenue and Percentage on Capital Cost.* The following table shows the net sums available to meet interest charges, also the percentage of such sums upon the capital cost of construction and equipment of lines open for traffic in each State for the years 1923 to 1927 :—

RAILWAYS, STATE.—NET REVENUE AND PERCENTAGE THEREOF ON CAPITAL COST OF LINES OPEN, 1923 TO 1927.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
				NET REVENUE.			
	£	£	£	£	£	£	£
1923	4,571,359	3,165,131	706,138	929,375	705,637	58,067	10,135,707
1924	4,699,086	3,240,241	723,287	1,028,130	929,391	35,283	10,655,418
1925	4,829,766	3,329,469	1,684,043	1,076,981	1,004,414	16,666	11,941,339
1926	4,419,039	3,122,914	977,298	a-2,843,412	828,243	41,153	6,545,235
1927	5,110,690	3,458,853	830,355	a-1,735,618	922,296	−11,840	8,574,736
				PERCENTAGE OF NET REVENUE ON CAPITAL EXPENDITURE.			
	%	%	%	%	%	%	%
1923	5.21	4.90	1.58	4.59	3.80	0.94	4.19
1924	5.12	4.92	1.53	4.80	4.90	0.51	4.23
1925	4.93	4.96	3.41	4.56	5.11	0.26	4.51
1926	4.26	4.54	1.90	a−11.14	4.07	0.63	2.37
1927	4.59	4.92	1.52	a− 6.17	4.42	−0.18	2.94

(a) See sub-section (ii), page 281.

These figures are also represented in the graphs which accompany this chapter.

The percentage of net revenue on capital expenditure for all States during the past five years reached its maximum during the year 1924–25, with a return of 4.51. The very low returns for 1925–26 and 1926–27 are due, in a large measure, to the unusual loading of the working expenses of those years in South Australia, which was alluded to in paragraph 8. But for this circumstance the percentages of net revenue on capital would have been 4.46 per cent. and 0.81 per cent. for South Australia and 3.81 per cent. and 3.61 per cent. respectively for the average of all States. Even these larger returns, however, would be insufficient to meet interest charges, for which particulars are included in the following sub-section.

(ii) *Net Revenue, Averages.* Tables showing the gross earnings and the working expenses per average mile worked and per train-mile run have been given previously. The net earnings, *i.e.*, the excess of gross earnings over working expenses per average mile worked and per train-mile run are shown in the following table :—

RAILWAYS, STATE.—NET REVENUE, AVERAGES, 1923 TO 1927.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
NET REVENUE PER AVERAGE MILE WORKED.							
	£	£	£	£	£	£	£
1923	880	734	121	394	199	88	462
1924	861	742	122	426	258	49	474
1925	867	749	277	429	273	25	522
1926	772	690	159	*a* – 1,142	216	61	279
1927	889	748	133	*a* – 688	236	– 18	361
NET REVENUE PER TRAIN-MILE RUN.							
	d.	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*
1923	50.57	46.33	15.52	38.50	37.59	9.71	40.05
1924	52.25	46.87	15.94	39.88	48.12	5.64	41.72
1925	49.74	45.71	33.38	38.85	49.77	2.95	43.58
1926	43.07	42.65	18.23	*a* – 99.68	40.88	7.36	23.06
1927	46.59	46.04	16.74	*a* – 59.85	41.97	– 2.18	29.48

(*a*) See sub-section (ii), page 281.

The net revenue per average mile worked and per train-mile run showed increases in all States with the exception of Queensland and Tasmania. Here again, however, the results are prejudicially affected by the loading of the working expenses in South Australia (see page 281). But for this, the net revenue for 1926–27 per mile worked would have been £90 in South Australia, and £444 for all States, while per train mile it would have been, respectively, 7.81d. and 36.23d.

10. **Profit or Loss.**—The following table shows the amount of interest payable on expenditure from loans on the construction and equipment of the railways, the actual profit or loss after deducting working expenses and interest and all other charges from the gross revenue, and the percentage of such profit or loss on the total capital cost of construction and equipment for the last five years :—

RAILWAYS, STATE.—PROFIT OR LOSS, 1923 TO 1927.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
AMOUNT OF INTEREST ON RAILWAY LOAN EXPENDITURE.							
	£	£	£	£	£	£	£
1923	4,487,303	2,937,709	1,998,694	923,606	768,244	255,007	11,370,563
1924	4,693,417	3,001,370	2,136,187	977,376	787,221	263,157	11,858,728
1925	4,796,829	3,085,648	2,419,503	1,018,117	813,849	279,832	12,413,778
1926	5,249,710	3,077,905	2,564,181	1,195,108	860,225	283,799	13,230,928
1927	5,562,308	3,271,374	2,720,717	1,332,515	887,740	285,255	14,059,909
PROFIT OR LOSS AFTER PAYMENT OF WORKING EXPENSES, INTEREST, AND OTHER CHARGES.							
	£	£	£	£	£	£	£
1923	+ 84,056	+ 227,422	−1,292,556	+ 5,769	− 62,607	− 196,940	−1,234,856
1924	+ 5,669	+ 238,871	−1,412,900	+ 50,754	+ 142,170	− 227,874	−1,203,310
1925	+ 32,937	+ 243,821	− 735,460	+ 58,864	+ 190,565	− 263,166	− 472,439
1926	− 830,671	+ 45,009	−1,586,883	*a*−4,038,520	− 31,982	− 242,646	−6,685,693
1927	− 451,618	+ 187,479	−1,890,362	*a*−3,068,133	+ 34,556	− 297,095	−5,485,173
PERCENTAGE OF PROFIT OR LOSS ON CAPITAL COST OF CONSTRUCTION AND EQUIPMENT.							
	%	%	%	%	%	%	%
1923	+0.10	+0.35	−2.88	+ 0.03	−0.34	−3.18	−0.51
1924	+0.01	+0.36	−2.98	+ 0.24	+0.75	−3.57	−0.48
1925	+0.03	+0.36	−1 49	+ 0.25	+0.97	−4.10	−0.18
1926	−0.80	+0.06	−3.08	*a* −15.82	−0.16	−3.76	−2.42
1927	−0.41	+0.27	−3.47	*a* −10.91	+0.17	−4.58	−1.88

Interest charges in 1926–27, viz., £14,059,909, show an increase of £2.689,346 over the amount payable in 1922–23. The interest payable on the cost of construction and equipment, exclusive of expenditure from Consolidated Revenue (£7,301,101) for that purpose, was at the rate of 4.95 per cent. in 1926–27. If the abnormal charges to working expenses in South Australia be eliminated, the loss in that State for 1926–27 would be 3.93 per cent., and for all States, 1.21 per cent.

11. **Traffic.**—(i) *General.* Reference has already been made to the difference in the traffic conditions on many of the lines. These conditions differ not only in the several States, but also on different lines in the same States, and apply to both passenger and goods traffic. By far the greater part of the population of Australia is confined to a fringe of country near the coast, more especially in the eastern and southern districts. A large proportion of the railway traffic between the chief centres of population is therefore carried over lines in the neighbourhood of the coast, and is thus, in some cases, open to sea-borne competition. On most of the lines extending into the interior traffic is light, as the density of population diminishes rapidly as the coastal regions are left behind, with a consequent diminution in the volume of traffic, while, in comparison with other more settled countries, there is but little back loading.

The following table gives particulars for the years 1923 to 1927 :—

RAILWAYS, STATE.—TRAFFIC, 1923 TO 1927.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
			NUMBER OF PASSENGER JOURNEYS.				
1923 ..	123,714,639	155,957,240	28,358,170	24,475,170	17,830,292	2,884,210	353,219,721
1924 ..	128,101,184	167,861,864	29,535,981	25,177,933	18.133,168	2.959,887	371,770.017
1925 ..	128,532,038	166,444,142	29,657.832	25,647,487	17.196,672	2,656.018	370,134,189
1926 ..	130,725,581	168,054,308	28,384,302	25,343,319	16,457,719	2,455,824	371.421,653
1927 ..	141,615,806	169,237,648	26,812,993	23,366,760	15,737,570	2,328,970	379,099,747
			PER 100 OF MEAN POPULATION.				
1923 ..	5,648	9,700	3,533	4,730	5,120	1,339	6,216
1924 ..	5,749	10,224	3,579	4,753	5,044	1,379	6,411
1925 ..	5,652	9,959	3,483	4.715	4,670	1,244	6,249
1926 ..	5,687	9,979	3,296	4,594	4,422	1,132	6,206
1927 ..	6,032	9,886	3,039	4,126	4,155	1,084	6,213
			PER AVERAGE MILE OF LINE WORKED.				
1923 ..	23,805	36,151	4,833	10,375	5,020	4,350	16,090
1924 ..	23,461	38,417	4,957	10,422	5,047	4,433	16,548
1925 ..	23,071	37,424	4,879	10,461	4,687	3,947	16,170
1926 ..	22,845	37,111	4,619	10,213	4,289	3,650	15,876
1927 ..	24,642	36,579	4,284	9,262	4,029	3,538	15,982
			TONNAGE OF GOODS AND LIVE STOCK CARRIED.				
1923 ..	13,801,310	7,517,216	4,208,989	3,283,594	2,624,320	568,346	32,003.775
1924 ..	15,693,127	8,309,543	4,273,926	3,565,307	3.023,299	706,961	35,572,163
1925 ..	16,208.476	8,959.556	5,083,658	3,611,313	3,284,915	690,561	37,838,479
1926 ..	15,032,811	8,728,496	5,106,386	3,562,245	3,237,496	694,194	36,361,628
1927 ..	17,224,894	9,234,923	4,315,513	3,671,686	3,438,587	730,273	38,615,876
			PER 100 OF MEAN POPULATION.				
1923 ..	630	467	524	635	754	264	563
1924 ..	704	506	518	671	841	329	612
1925 ..	719	536	597	664	892	323	645
1926 ..	654	518	593	646	870	320	608
1927 ..	734	539	489	648	908	340	633
			PER AVERAGE MILE OF LINE WORKED.				
1923 ..	2,656	1,743	717	1,391	739	857	1,458
1924 ..	2,874	1,902	717	1,476	842	1,059	1,583
1925 ..	2,909	2,014	836	1,473	895	1,026	1,652
1926 ..	2,627	1,928	831	1,430	844	1,032	1,554
1927 ..	2,997	1,996	689	1,455	880	1,109	1,628

(ii) *Metropolitan and Country Passenger Traffic and Revenue.* A further indication of the difference in passenger traffic conditions is obtained from a comparison of the volume of metropolitan and suburban, and country traffic in each State. This is shown below for the year 1926–27 :—

RAILWAYS, STATE.—METROPOLITAN AND SUBURBAN, AND COUNTRY PASSENGER TRAFFIC AND RECEIPTS, 1926-27.

Particulars.	Passenger Journeys.			Revenue.		
	Metropolitan and Suburban.	Country.	Total.	Metropolitan and Suburban.	Country.	Total.
	No.	No.	No.	£	£	£
N.S.W. ..	*a*130,317,129	11,298,677	141,615,806	2,465,105	4,178,232	6,643,337
Victoria ..	*b*160,154,499	9,083,149	169,237,648	2,880,117	2,760,915	5,641,032
Queensland ..	21,278,358	5,534,635	26,812,993	420,770	1,594,411	2,015,181
S. Australia ..	*c* 21,368,189	1,998,571	23,366,760	397,690	672,293	*f* 1,069,983
W. Australia	13,519,094	2,218,476	15,737,570	232,950	562,334	795,284
Tasmania ..	(*d*)	(*d*)	2,328,970	(*d*)	(*d*)	168,837
Total	(*e*)	(*e*)	379,099,747	(*e*)	(*e*)	16,333,654

(*a*) Within 34 miles of Sydney and Newcastle, including the Richmond line. (*b*) Within 20 miles of Melbourne. (*c*) Within 25 miles of Adelaide. (*d*) Not available. (*e*) Incomplete. (*f*) Includes £64,359 revenue from road motors, distribution of which between metropolitan and country is not available.

Although the number of passenger journeys recorded in the metropolitan area in Victoria is considerably greater than in New South Wales, it must be borne in mind that in the latter State other transport facilities, viz., tramways, motor-omnibuses, and ferries, are more extensively used.

A more detailed analysis of the passenger traffic for the years ended 30th June, 1926 and 1927, is contained in the Transport and Communication Bulletin No. 19 issued by this Bureau.

(iii) *Electrification of Suburban and Country Railways.* Electrification of the Melbourne Suburban Railways was completed in April, 1923. The scheme comprised the electrification of 157 route-miles of steam-operated railway, including sidings, and the conversion and construction of the necessary rolling stock. Particulars of the lines concerned were given in Year Book No. 15, p. 564. Considerable progress has been made with the electrification of the Sydney Suburban System, and on 1st March, 1926, electric trains were operating on the Illawarra line, while on 20th December, 1926, the first of the underground electric lines—from Sydney Central Station to St. James—was opened for traffic. As the traffic on main country lines develops, it is intended to convert to electric traction busy sections which are within reasonable distance of a cheap power supply, and investigations are being made in order to determine which line offers prospects of financial success.

(iv) *Goods Traffic.* (*a*) *Classification.* The differing conditions of the traffic in each State might also, to some extent, be analysed by an examination of the tonnage of various classes of commodities carried, and of the revenue derived therefrom. Comparative particulars regarding the quantities of some of the leading classes of commodities carried are available for all the States, and the following table shows the number of tons of various representative commodities carried, with the percentage of each class on the total for the financial year 1926–27 :—

RAILWAYS, STATE.—CLASSIFICATION OF COMMODITIES CARRIED, 1926-27.

State.	Coal, Coke and Shale.	Other Minerals.	Grain and Flour.	Hay, Straw, and Chaff.	Wool.	Live Stock.	All other Commodities.	Total.
				TONS CARRIED.				
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
New South Wales	8,289,937	2,439,520	1,523,519	355,264	189,605	810,515	3,616,534	17,224,894
Victoria ..	553,753	1,989,918	1,514,601	321,290	99,575	586,435	4,169,351	9,234,923
Queensland ..	648,962	478,681	1,473,215*a*	*b*	62,660	361,669	1,290,326	4,315,513
South Australia	338,369	614,326	798,675	165,624	38,422	154,750	1,561,520	3,671,686
Western Australia	242,473	580,232	830,433	89,646	21,334	100,474	1,573,995	3,438,587
Tasmania ..	329,397	*c*	86,255	38,623	3,306	23,049	249,643	730,273
All States ..	10,402,891	6,102,677	6,226,698	970,447	414,902	2,036,892	12,461,369	38,615,876
				PERCENTAGE ON TOTAL TONNAGE CARRIED.				
	%	%	%	%	%	%	%	%
New South Wales	48.13	14.16	8.84	2.06	1.10	4.71	21.00	100.00
Victoria ..	5.99	21.55	16.40	3.48	1.08	6.35	45.15	100.00
Queensland ..	15.04	11.09	34.14*a*	*b*	1.45	8.38	29.90	100.00
South Australia	9.22	16.73	21.75	4.51	1.05	4.21	42.53	100.00
Western Australia	7.05	16.87	24.15	2.61	0.62	2.92	45.78	100.00
Tasmania ..	45.11	*c*	11.81	5.29	0.45	3.16	34.18	100.00
All States ..	26.94	15.80	16.13	2.51	1.07	5.28	32.27	100.00

(*a*) Agricultural produce. (*b*) Included with "All other Commodities." (*c*) Included with coal, coke, and shale.

(*b*) *Revenue.* The following table shows the revenue derived from goods and live stock traffic during 1926–27 according to a classification which has been adopted by all States :—

RAILWAYS, STATE.—GOODS, ETC., TRAFFIC—REVENUE, 1926-27.

Class.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Total.
	£	£	£	£	£	£	£
General merchandise	5,890,130	4,058,783	2,986,682	1,446,140	1,528,979	223,390	16,134,104
Wheat	*a*	771,235	*a*	314,210	404,029	*a*	*d*1,489,474
Wool	849,622	272,048	425,247	79,225	80,011	4,975	1,711,128
Live stock ..	1,563,973	649,743	753,777	194,359	140,333	20,565	3,322,750
Minerals—							
Coal, coke, and shale ..	1,584,463	174,704	242,386	204,224	127,638	*b*27,851	2,361,266
Others ..	602,405	417,583	221,011	424,708	132,862	*c*42,495	1,841,064
Total ..	10,490,593	6,344,096	4,629,103	2,662,866	2,413,852	319,276	26,859,786

(*a*) Included with General Merchandise. (*b*) Native coal. (*c*) Minerals other than native coal. (*d*) Incomplete.

In Victoria electric motor coaches are used for the transfer of parcels from the central stations to suburban stations, and to convey luggage and parcels between the two main terminal stations.

12. **Passenger-Mileage and Ton-Mileage.**—(i) *Passenger-Miles.* The subjoined table gives particulars of passenger-mileage in respect of the States of New South Wales, Victoria, South Australia, and Tasmania for the years 1922–23 to 1926–27.

RAILWAYS, STATE.—SUMMARY OF "PASSENGER-MILES," 1923 TO 1927.

Year ended 30th June—	Passenger-Train-Mileage.	Number of Passenger Journeys.	Total Passenger-Miles.	Amount Received from Passengers.	Average Number of Passengers carried per Train.	Average Mileage per Passenger Journey.	Average Earnings per Passenger-Mile.	Average Fare per Passenger Journey.	Density of Traffic per Average Mile Worked.
	Miles. (,000 omitted.)	No. (,000 omitted.)	No. (,000 omitted.)	£	No.	Miles	*d.*	*d.*	No.
				NEW SOUTH WALES.					
1923	11,822	123,715	1,679,903	6,004,702	142	13.58	0.86	11.65	323,260
1924	12,385	128,101	1,721,161	6,076,988	139	13.44	0.85	11.39	315,216
1925	12,616	128,532	1,637,381	6,186,368	130	12.74	0.91	11.55	293,907
1926	14,038	130,726	1,675,091	6,311,690	119	12.81	0.90	11.59	292,732
1927	15,044	141,616	1,765,378	6,643,337	117	12.47	0.90	11.26	307,184
				VICTORIA.					
1923	10,626	155,957	1,332,694	5,094,595	125	8.54	0.92	7.84	308,892
1924	11,140	167,862	1,421,771	5,330,614	128	8.47	0.90	7.62	325,391
1925	11,602	166,444	1,426,411	5,380,887	123	8.57	0.91	7.76	320,718
1926	11,768	168,054	1,460,343	5,425,804	125	8.69	0.82	7.75	322,487
1927	11,846	169,238	1,476,307	5,641,032	125	8.72	0.92	8.00	319,064
				SOUTH AUSTRALIA.					
1923	2,833	24,481	282,387	1,078,155	100	11.54	0.92	10.57	119,718
1924	2,918	25,107	290,843	1,088,046	100	11.58	0.90	10.40	120,394
1925	3,460	25,647	302,185	1,114,558	97	11.78	0.89	10.43	123,255
1926	3,662	25,343	300,950	1,075,082	82	11.87	0.86	10.18	120,836
1927	4,002	23,367	280,082	1,005,624	70	11.99	0.86	10.33	111,022
				TASMANIA.					
1923	692	2,884	46,032	228,458	67	15.96	1.19	19.01	69,388
1924	672	2,960	46,766	218,020	70	15.80	1.11	17.68	70,036
1925	654	2,656	45,126	187,701	69	16.99	0.99	16.96	67,061
1926	596	2,456	39,342	173,488	66	16.02	1.06	15.67	58,466
1927	575	2,329	41,432	168,837	72	17.79	0.97	17.40	62,943

The differences in the number of passenger journeys given in this table and that in connexion with traffic in respect of the State of South Australia for the years 1922 to 1924 inclusive are accounted for by the fact that the latter table is compiled from the receipts from passenger traffic, while the former is based on the passenger traffic carried.

(ii) *Ton-Miles.* Particulars regarding total "ton-miles" are given in the following table for each of the years 1922–23 to 1926–27 in respect of all States with the exception of Queensland :—

RAILWAYS, STATE.—SUMMARY OF "TON-MILES," 1923 TO 1927.

Year ended the 30th June—	Goods-Train-Mileage.	Total Tons Carried.	Total "Ton-miles."	Earnings.	Average Freight-paying Load Carried per "Train."	Average Haul per Ton.	Earnings per "Ton-mile."	Density of Traffic per Average Mile Worked.
	No. (,000 omitted.)	No. (,000 omitted.)	No. (,000 omitted.)	£	Tons.	Miles.	d.	Tons.
				NEW SOUTH WALES.				
1923	9,871	13,567	1,166,238	7,868,769	160	85.96	1.60	224,417
1924	11,322	15,516	1,392,390	8,096,274	163	89.74	1.37	255,005
1925	10,689	16,027	1,647,448	9,010,929	177	102.80	1.29	295,718
1926	10,587	14,809	1,509,555	8,941,123	165	101.93	1.39	263,802
1927	11,282	16,864	1,654,815	10,335,666	165	98.13	1.50	287,994
				VICTORIA.				
1923	5,768	7,517	673,904	4,953,192	145	89.65	1.76	156,198
1924	5,939	8,310	745,301	5,204,526	154	89.69	1.68	170,588
1925	5,880	8,960	847,202	5,775,522	176	94.56	1.64	190,468
1926	5,808	8,728	776,251	5,565,451	166	88.93	1.72	171,434
1927	6,184	9,235	882,918	6,344,096	173	95.61	1.72	190,819
				SOUTH AUSTRALIA.				
1923	3,374	3,284	368,525	2,378,035	113	112.23	1.55	156,241
1924	3,269	3,565	384,576	2,558,706	129	107.87	1.60	159,195
1925	3,193	*a*3,611	*a*393,649	2,607,628	134	109.00	1.59	160,559
1926	3,184	3,563	387,317	2,579,365	134	108.70	1.60	155,518
1927	2,957	3,672	389,443	2,662,866	141	105.66	1.65	154,451
				WESTERN AUSTRALIA.				
1923	2,659	2,624	210,151	1,768,211	93	80.08	2.02	59,164
1924	2,916	3,023	252,796	2,050,707	100	83.62	1.95	70,364
1925	3,053	3,285	277,190	2,198,322	104	84.38	1.90	75,553
1926	2,976	3,237	272,611	2,174,895	106	84.20	1.91	71,048
1927	*b*3,359	3,439	317,845	2,413,852	110	92.43	1.82	81,373
				TASMANIA.				
1923	743	547	27,297	275,968	37	49.29	2.42	41,147
1924	744	685	30,019	300,156	40	43.83	2.39	44,955
1925	726	668	29,697	292,004	41	44.45	2.36	44,133
1926	762	669	32,000	298,078	42	47.82	2.23	47,556
1927	742	707	31,564	296,354	43	44.63	2.25	47,955

(*a*) Based on 10 months actual and 2 months estimated. (*b*) Includes "Assistant" and "Light" mileage.

In New South Wales the tonnage carried is exclusive of coal on which shunting and haulage charges only have been collected, and terminal charges have also been disregarded, but in the cases of South Australia and Tasmania such charges are included. Particulars for the latter State do not include live stock.

13. **Passenger Fares and Goods Rates.**—Fares and rates are changed from time to time to suit the varying necessities of the railways, and when drought conditions prevail special concessions are made in the rates for the carriage of fodder and water and for the transfer of stock to other areas.

An earlier issue of this work (No. 18, pp. 305–6) gives detailed information as at 30th June, 1924, in regard to the following rates :—(*a*) Ordinary Passenger Mileage rates ; (*b*) Highest and Lowest Class Freight rates ; (*c*) Rates for agricultural produce. Owing to limitations of space, however, it is not proposed to republish such information unless substantial alterations are made in these rates.

14. **Rolling Stock, 1927.**—The following table shows the rolling stock in use at the 30th June, 1927, classified according to gauge :—

RAILWAYS, STATE.—ROLLING STOCK, 1927.

State.	Gauge.								Total.	
	5 ft. 3 in.		4 ft. 8½ in.		3 ft. 6 in.		2 ft. 6 in.	2 ft. 0 in.		
LOCOMOTIVES.										
New South Wales	..		1,420		...		..	..	1,420	
Victoria ..	653		..		..		19	..	672	
Queensland ..	..		..		750		..	11	761	
South Australia	269		..		220		..	..	489	
Western Australia	..		..		395		..	..	395	
Tasmania ..	..		..		89		..	6	95	
All States	922		1,420		1,454		19	17	3,832	
COACHING STOCK.										
	Ordinary.	With Motors.	Ordinary.	With Motors.	Ordinary.	With Motors.	Ordinary.	Ordinary.	Ordinary.	With Motors.
New South Wales	..	..	2,310	28	..	..	..	..	2,310	28
Victoria ..	2,262	414	..	..	..	..	55	..	2,317	414
Queensland ..	..	..	..	..	1,195	17	..	11	1,206	17
South Australia	482	14	..	..	209	..	..	..	691	14
Western Australia	..	..	..	..	477	2	..	..	477	2
Tasmania ..	..	..	..	..	229	12	..	6	235	12
All States ..	2,744	428	2,310	28	2,110	31	55	17	7,236	487
STOCK OTHER THAN COACHING.										
New South Wales	..		23,889		..		..	..	23,889	
Victoria ..	19,887		..		..		243	..	20,130	
Queensland ..	..		..		18,476		..	170	18,646	
South Australia	3,603		..		5,689		..	..	9,292	
Western Australia	..		..		10,527		..	..	10,527	
Tasmania ..	..		..		1,802		..	77	1,879	
All States ..	23,490		23,889		36,494		243	247	84,363	

Prior to the issue of Year Book No. 16 (1921–22) the particulars of rolling stock were classified under the headings of "Locomotives," "Passenger Vehicles," and "Vehicles other than Passenger." The present classification has now been adopted by all States.

15. **Employees.**—(i) *At 30th June.* The following table gives the number of railway employees in each year from 1923 to 1927 inclusive, classified according to (*a*) salaried staff, and (*b*) wages staff :—

RAILWAYS, STATE.—EMPLOYEES, 1923 TO 1927.

State.	At 30th June—									
	1923.		1924.		1925.		1926.		1927.	
	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.	Salaried Staff.	Wages Staff.
New South Wales	5,356	34,271	5,473	36,127	5,672	36,455	5,794	38,263	6,004	39,488
Victoria	4,030	22,577	4,083	23,400	4,153	24,857	4,323	24,465	4,245	25,072
Queensland ..	3,250	17,621	3,298	16,380	3,362	16,522	3,617	18,419	3,565	16,105
South Australia ..	1,108	8,429	1,208	9,438	1,316	11,519	1,362	9,801	1,438	8,098
Western Australia	1,180	6,259	1,224	6,510	1,282	6,334	1,318	6,697	1,362	7,471
Tasmania ..	216	1,842	190	1,406	169	1,297	185	1,219	187	1,232
All States ..	15,140	90,999	15,476	93,261	15,954	96,984	16,599	98,864	16,801	98,366

In the period under review the totals of salaried and wages staffs rose from 106,139 in 1923 to 115,167 in 1927, an increase of 9 per cent.

(ii) *Average staff employed*, 1926–27. The number of employees at one point of time does not afford the best index of employment in railway work. It is considered that the following statement of the average number employed throughout the year indicates more accurately the labour requirements of the railways.

AVERAGE STAFF EMPLOYED, 1926-27.

State.	Operating Staff.		Construction Staff.		All Employees—Staff.	
	Salaried.	Wages.	Salaried.	Wages.	Salaried.	Wages.
New South Wales ..	5,890	39,375	187	1,426	6,077	40,801
Victoria	4,287	25,139	..	..	4,287	25,139
Queensland	3,693	16,445	105	2,994	3,798	19,439
South Australia ..	1,399	9,284	53	2,739	1,452	12,023
Western Australia ..	1,340	7,487	..	..	1,340	7,487
Tasmania	186	1,225	..	..	186	1,225
All States ..	16,795	98,955	345	7,159	17,140	106,114

In the States of Victoria, Western Australia, and Tasmania, railway construction work is not under the control of the Railways Commissioners.

16. Accidents.—(i) *Classification.* The following classification of accidents which occurred through the movement of rolling stock was adopted by each State in 1924–25.

Particulars for 1926–27 are as under :—

RAILWAYS, STATE.—ACCIDENTS, 1927.

Particulars.	N.S.W.		Vic.		Q'land.		S. Aust.		W. Aust.		Tas.		All States.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
Train accidents—														
Passengers	27	62	..	12	..	2	..	2	..	..	..	..	27	78
Employees	..	47	..	..	1	3	..	8	..	21	..	..	1	79
Accidents on line (other than train accidents)—														
Passengers	14	143	4	171	1	30	3	45	3	37	..	2	25	428
Employees	26	130	2	32	7	9	4	108	..	138	..	33	39	450
Others	17	70	1	3	..	4	..	..	..	..	..	3	18	80
Shunting accidents—														
Passengers	..	4	..	..	..	1	..	..	..	3	..	..	..	8
Employees	6	198	1	40	5	91	2	67	1	115	..	3	15	514
Other persons	..	6	2	5	..	1	..	..	..	..	..	..	2	12
Employees proceeding to or from their duty within railway boundaries ..	2	3	4	1	1	..	..	..	..	..	..	..	7	4
Persons killed or injured at crossings	11	20	11	25	2	15	7	28	7	28	..	3	38	119
Trespassers	20	4	28	3	9	4	6	..	4	3	..	..	67	14
Miscellaneous	..	..	..	..	..	7	..	5	2	20	..	..	2	32
Total	123	687	53	292	26	167	22	263	17	365	..	44	241	1,818

(ii) *Particulars for Quinquennium.* The subjoined table gives particulars of the number of persons killed and injured through train accidents and the movement of rolling stock on the Government railways in each State for each of the years 1923 to 1927 inclusive :—

RAILWAYS, STATE.—ACCIDENTS, 1923 TO 1927.

State.	In year ended 30th June—									
	1923.		1924.		1925.		1926.		1927.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
New South Wales	45	498	77	526	69	597	72	594	123	687
Victoria	51	372	51	362	47	298	78	498	53	292
Queensland ..	17	563	(*a*)	(*a*)	45	283	25	212	26	167
South Australia ..	16	262	16	211	26	203	22	329	22	263
Western Australia	14	147	16	212	16	208	12	341	17	365
Tasmania ..	1	34	5	36	2	17	4	39	..	44
All States ..	144	1,876	(*b*)165	(*b*)1,347	205	1,606	213	2,013	241	1,818

(*a*) Not available. (*b*) Incomplete.

17. **Consumption of Oil and Fuel.**—The appended table shows the quantity and value of oil and fuel consumed by the various Government Railway Departments during the year 1926–27 :—

GOVERNMENT RAILWAYS.—CONSUMPTION AND VALUE OF OIL AND FUEL, 1926-27.

Government Railways.	Oil.						Coal.		
	Lubricating.			Fuel.					
	Gallons.	Value.	Average Cost per Gallon.	Gallons.	Value.	Average Cost per Gallon.	Tons.	Value.	Average Cost per Ton.
		£	*s.* *d.*			*s.* *d.*		£	£ *s.* *d.*
New South Wales	507,151	57,886	2 3·39	972,254	47,611	0 11·75	1,743,572	1,590,170	0 18 2·88
Victoria . ..	185,000	23,000	2 5·84	872,500	35,240	0 9·69	695,183	975,662	1 8 0·83
Queensland ..	266,894	26,054	1 11·43	270,749	17,058	1 3·12	474,747	448,959	0 18 10·96
South Australia	*a*155,525	18,538	2 4·61	*b*	*b*	*b*	273,044	574,944	2 2 1·36
Western Australia	55,608	6,056	2 2·14	248,692	17,932	1 5·31	292,692	285,603	0 19 6·19
Tasmania ..	27,192	3,305	2 5·17	10,408	764	1 5·62	45,329	59,810	1 6 4·67
Total States	1,197,370	134,839	2 3·03	*c*2,374,603	*c*118,605	*c*0 11·99	3,524,567	3,935,148	1 2 3·96
Federal ..	22,824	3,155	2 9·18	92,193	9,792	2 1·49	29,577	70,894	2 7 11·26
Grand Total, Australia ..	1,220,194	137,994	2 3·14	*c*2,466,796	*c*128,397	*c*1 0·49	3,554,144	4,006,042	1 2 6·52

(*a*) Lubricating oil used on loco. cars and wagons only.
(*b*) Not available.
(*c*) Exclusive of South Australia.

The range in the average cost per ton of coal from 18s. 2d. in New South Wales to £2 7s. 11d. per ton for coal used on the Federal Railways is attributable to the comparatively low haulage expenses incurred in the coal-producing States. The average cost of coal and oil during 1926–27 varied very little from that of 1925–26.

§ 4. Government Railways Generally.

1. **Summary, Federal and State Government Railways.**—In the following table a summary is given of the working of all Federal and State Government railways for the year ended 30th June, 1927 :—

RAILWAYS, FEDERAL AND STATE.—SUMMARY, 1927.

Particulars.		Federal Railways.	State Railways.	Total for Australia.
Total mileage open	Miles	1,733.02	23,789.93	25,522.95
Average miles open during the year ..	„	1,733	23,720	25,453
Total train mileage..	„	832,661	69,798,910	70,631,571
Total cost of construction of lines open	£	12,302,795	291,482,593	303,785,388
Cost per mile	£	7,099	12,252	11,902
Gross revenue	£	498,708	48,094,128	48,592,836
Working expenses	£	471,495	39,519,392	39,990,887
Percentage of working expenses on gross revenue	%	94.53	82.17	82.30
Net revenue	£	27,213	8,574,736	8,601,949
Interest payable	£	318,702	14,059,909	14,378,611
Number of passenger journeys ..	No.	221,384	379,099,747	379,321,131
Tonnage of goods and live stock carried	Tons	224,613	38,561,876	38,786,489
Number of employees at 30th June, 1927—				
Salaried	No.	195	16,801	16,996
Wages	„	1,065	98,366	99,431
Number of persons killed and injured during the year through train accidents and movement of rolling stock—				
Killed	„	2	241	243
Injured	„	22	1,818	1,840

A graph which accompanies this chapter illustrates the total capital cost, mileage open, average cost per mile open, gross revenue, working expenses, and net revenue for each of the years 1870 to 1927.

2. **Mileage Open for Traffic.**—(i) *Route Mileage.* The Government railway route mileages open for traffic, classified according to gauge, as at the 30th June in each of the years 1924 to 1927 are set out in the following table, which gives also the percentages of the mileage of each gauge on the total on the mainland—the figures for Tasmania being shown separately, as in the case of the table hereinafter relating to rolling stock :—

RAILWAYS, FEDERAL AND STATE.—ROUTE MILEAGE, 1924 TO 1927.

Gauge.	At 30th June—							
	1924.		1925.		1926.		1927.	
	Miles.	%	Miles.	%	Miles.	%	Miles.	%
Mainland—								
5 ft. 3 in. ..	5,503.37	23.12	5,552.31	22.97	5,743.41	23.25	5,756.89	23.15
4 ft. 8½ in. ..	6,539.68	27.46	6,672.63	27.60	6,758.70	27.36	6,766.92	27.22
3 ft. 6 in. ..	11,615.91	48.78	11,794.20	48.79	12,051.46	48.78	12,188.86	49.02
2 ft. 6 in. ..	121.77	0.51	121.77	0.51	121.77	0.49	121.77	0.49
2 ft. 0 in. ..	30.26	0.13	30.26	0.13	30.26	0.12	30.26	0.12
Total ..	23,810.99	100.00	24,171.17	100.00	24,705.60	100.00	24,864.70	100.00
Tasmania—								
3 ft. 6 in. ..	648.07	..	648.07	..	648.07	..	633.42	..
2 ft. 0 in. ..	24.83	..	24.83	..	24.83	..	24.83	..
Grand Total	24,483.89	..	24,844.07	..	25,378.50	..	25,522.95	..

In the three years from 1924 to 1927 the percentage of 5 ft. 3 in. gauge mileage has increased by 0.03, the 3 ft. 6 in. by 0.24, while the 4 ft. 8½ in. gauge has decreased by 0.24.

(ii) *Track Mileage.* The following table gives the track mileages of all Government railways and sidings, exclusive of Tasmania, for the years ended 30th June, 1924 to 1927, classified according to gauge, together with the percentages on the total :—

RAILWAYS, FEDERAL AND STATE.—TRACK MILEAGE (a) 1924 TO 1927.

Gauge.	At 30th June— 1924.		1925.		1926.		1927.	
	Miles.	%	Miles.	%	Miles.	%	Miles.	%
5 ft. 3 in. ..	7,076.24	24.76	7,167.23	24.74	7,427.27	25.05	7,465.59	24.95
4 ft. 8½ in. ..	8,424.07	29.47	8,593.18	29.66	8,710.62	29·37	8,749.82	29.24
3 ft. 6 in. ..	12,915.09	45.19	13,042.93	45.04	13,353.87	45.03	13,543.00	45.26
2 ft. 6 in. ..	131.54	0.46	131.54	0.45	131.56	0.44	131.56	0.44
2 ft. 0 in. ..	33.00	0.12	33.00	0.11	33.00	0.11	33.00	0.11
Total ..	28,579.94	100.00	28,967.88	100.00	29,656.32	100.00	29,922.97	100.00

(a) Exclusive of Tasmania.

3. **Rolling Stock.**—The numbers of the rolling stock employed on both the Federal and State Government railways are set out hereunder, classified according to gauge, at the 30th June, 1927, together with the percentage of the numbers for each gauge on the total for the mainland. The figures for Tasmania are shown separately.

RAILWAYS, FEDERAL AND STATE.—ROLLING STOCK, 1927.

Gauge.	Locomotives.		Coaching Stock. Ordinary.		With Motors.		Total.		Vehicles other than Coaching.	
	No.	%	No.	%	No.	%	No.	%	No.	%
Mainland—										
5 ft. 3 in. ..	922	24.02	2,744	38.79	428	90.11	3,172	42.02	23,490	28.02
4 ft. 8½ in. ..	1,488	38.76	2,359	33.35	28	5.89	2,387	31.62	24,623	29.37
3 ft. 6 in. ..	1,399	36.44	1,905	26.93	19	4.00	1,924	25.49	35,312	42.12
2 ft. 6 in. ..	19	0.49	55	0.78	..	..	55	0.73	243	0.29
2 ft. 0 in. ..	11	0.29	11	0.15	..	..	11	0.14	170	0.20
Total ..	3,839	100.00	7,074	100.00	475	100.00	7,549	100.00	83,838	100.00
Tasmania—										
3 ft. 6 in. ..	89	..	229	..	12	..	241	..	1,802	..
2 ft. 0 in. ..	6	..	6	..	..	..	6	..	77	..
Grand Total	3,934	..	7,309	..	487	..	7,796	..	85,717	..

§ 5. Private Railways.

1. **Total Mileage Open, 1926-27.**—The bulk of the private railways in Australia have been laid down for the purpose of hauling timber, firewood, sugar-cane, coal, or other minerals, and they are not generally used for the conveyance of passengers or for public traffic. In many cases the lines are practically unballasted and easily removable.

The railways referred to herein include (*a*) lines open to the public for general passenger and goods traffic ; and (*b*) branch lines from Government railways and other lines which are used for special purposes and which are of a permanent description. Other lines are referred to in the part of this chapter dealing with Tramways (see C. *Tramways*).

The following table gives particulars of private railways open for traffic for general and special purposes during 1926–27. A classification of these lines according to gauge has already been given in § 1.

RAILWAYS, PRIVATE.—MILEAGE OPEN, 1926-27.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
For general traffic	142.03	24.94	302.02	33.80	277.00	187.61	967.40
For special purposes	188.61	45.47	1,108.18	22.48	595.09	216.40	2,176.23
Total ..	330.64	70.41	1,410.20	56.28	872.09	404.01	3,143.63

2. Lines Open for General Traffic.—The following statement gives a summary of the operations of private railways open for general traffic for the year 1927. More detailed information regarding these lines will be found in "Transport and Communication Bulletin No. 19," published by this Bureau.

RAILWAYS, PRIVATE.—SUMMARY, 1926-27.

State.	Companies from which returns were received.	Miles Open (Route).	Capital Cost.	Gross Revenue.	Working Expenses.	Train-Miles.	Passenger Journeys.	Tonnage of Goods, etc.	No. of Employees.	Rolling Stock. Locos.	Rolling Stock. Coaches.	Rolling Stock. Other Vehicles.
	No.	Miles.	£	£	£	Miles.	No.	Tons.	No.	No.	No.	No.
New South Wales ..	9	142.03	2,520,151	418,426	291,517	683,167	1,908,178	1,007,893	658	51	39	756
Victoria ..	2	24.94	90,264	15,604	11,448	32,048	28,833	60,188	23	4	4	42
Queensland	17	302.02	634,408	31,413	27,861	43,197	19,537	107,275	57	20	20	389
South Australia ..	1	33.80	*a*	*a*	*a*	76,650	1,150	630,042	41	7	3	163
Western Australia	1	277.00	2,101,485	206,467	89,168	286,444	58,401	151,596	232	21	20	427
Tasmania	6	187.61	1,271,185	112,264	87,524	157,674	57,542	138,535	242	24	20	391
All States(*b*)	36	967.40	6,617,493	784,174	507,518	1,279,180	2,073,641	2,095,529	1,253	127	106	2,168

(*a*) Not available. (*b*) Incomplete.

The particulars given in the table are incomplete in respect of the States of New South Wales, Queensland, South Australia, and Tasmania. In New South Wales and Queensland several of these lines, although owned by private companies, are operated by the Government Railway Departments, and Government rolling stock is used thereon.

§ 6. Comparative Railway Statistics, Various Countries.

In § 1.7 *ante* a table is given showing comparative railway facilities in 1926–27 in Australia.

In the appended table comparative railway statistics of a like character are given for the principal countries of the world. The figures are based upon the latest accurate returns for both population and railway mileage.

RAILWAYS, VARIOUS COUNTRIES.—MILEAGE, POPULATION, AND AREA.

Country.	Year.	Miles of Railway.	Miles of Railway—	
			Per 1,000 of Population.	Per 1,000 Sq. Miles of Territory.
Europe—				
Great Britain and Ireland	1926	21,161	0.46	223.57
Belgium	1926	3,167	0.40	269.42
Denmark	1926	3,154	0.92	190.37
France	1926	25,808	0.63	121.36
Germany	1926	35,999	0.56	198.11
Greece	1926	1,940	0.29	38.87
Italy	1926	12,420	0.30	103.75
Netherlands	1926	2,255	0.29	179.07
Norway	1926	2,119	0.76	16.96
Portugal	1925	2,001	0.33	56.38
Spain	1926	10,010	0.44	51.39
Sweden	1926	9,991	1.64	57.70
Switzerland	1925	3,607	0.92	226.29
Asia—				
India	1926	39,049	0.12	21.63
Japan	1926	10,884	0.13	41.82
Africa—				
Egypt	1927	3,126	0.22	8.16
Union of South Africa	1926	12,879	1.71	22.63
America, North and Central—				
Canada	1927	42,021	4.41	11.85
Mexico	1926	13,197	0.92	17.20
United States	1926	261,562	2.23	86.41
America, South—				
Argentine	1927	22,791	2.20	19.60
Brazil	1926	19,026	0.51	5.79
Chile	1927	5,437	1.35	18.74
Australasia—				
Australia	1927	28,867	4.65	9.64
New Zealand	1926	3,281	2.45	31.76

The figures show that per 1,000 of population Australia had the greatest mileage (in 1927), 4.65 miles; the next in magnitude being Canada (1927), with 4.41 miles.

The least mileage per 1,000 of population is shown in the cases of India and Japan (1926), with 0.12 and 0.13 miles respectively.

With regard to the mileage per 1,000 square miles of territory, Belgium (1926) with 269.42 miles was easily first, followed by Switzerland (in 1925) with 226.29 miles, and Great Britain and Ireland (1926) 223.57 miles.

The least mileage open per 1,000 square miles is that of Brazil (in 1926) with 5.79 miles, and Egypt (1927) with 8.16 miles.

C. TRAMWAYS.

1. Systems in Operation.—(i) *General.* Tramway systems are in operation in all the States, and in recent years considerable extension has been made in the use of electrical traction, the benefit of which is now enjoyed by a number of the larger towns.

In many parts of Australia private lines used for special purposes in connexion with the timber, mining, sugar, or other industries are often called tramways, but they are more properly railways, and the traffic on them has nothing in common with that of the street tramways for the conveyance of passengers, which are dealt with in the present paragraph.

(ii) *Total Mileage Open and Classification of Lines.* The following tables show the total mileage of tramway lines open for general passenger traffic for the year 1926–27, also in Australia as a whole for the years 1922–23 to 1926–27, classified (*a*) according to the nature of the authority by which the lines are controlled; (*b*) according to the motive power utilized, and (*c*) according to gauge :—

TRAMWAYS.—ROUTE MILEAGE OPEN, 1926-27.

Nature of Motive Power, and Gauge.	N.S. Wales.	Victoria.	Q'land.	South Australia.	Western Australia.	Tasmania.	Total, Australia.
GOVERNMENT.							
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
Electric	185.85	111.93	..	..	36.68	..	334.46
Steam	42.65	..	..	..	17.75	..	60.40
Cable	..	33.68	..	..	..	..	33.68
Horse	..	..	..	..	2.51	..	2.51
Total ..	228.50	145.61	..	..	56.94	..	431.05
MUNICIPAL.							
Electric	..	..	53.53	73.05	8.61	26.86	162.05
Steam	..	..	6.65	..	..	..	6.65
Total ..	..	..	60.18	73.05	8.61	26.86	168.70
PRIVATE.							
Electric	..	27.60	..	..	14.31	..	41.91
Steam	3.50	..	..	..	..	..	3.50
Total ..	3.50	27.60	..	..	14.31	..	45.41
ALL CONTROLLING AUTHORITIES.							
Electric	185.85	139.53	53.53	73.05	59.60	26.86	538.42
Steam	46.15	..	6.65	..	17.75	..	70.55
Cable	..	33.68	..	..	..	..	33.68
Horse	..	..	..	..	2.51	..	2.51
Total ..	232.00	173.21	60.18	73.05	79.86	26.86	645.16
ACCORDING TO GAUGE.							
Gauge—							
5 ft. 3 in. ..	..	5.18	..	..	..	..	5.18
4 ft. 8½ in. ..	232.00	168.03	53.53	73.05	..	..	526.61
3 ft. 6 in. ..	..	..	6.65	..	67.36	26.86	100.87
2 ft. 0 in. ..	..	..	..	..	12.50	..	12.50
Total ..	232.00	173.21	60.18	73.05	79.86	26.86	645.16

TRAMWAYS.—ROUTE MILEAGE OPEN, AUSTRALIA, 1922-23 TO 1926-27.

Nature of Motive Power, Controlling Authority, and Gauge.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
ACCORDING TO MOTIVE POWER.					
	Miles.	Miles.	Miles.	Miles.	Miles.
Electric	460.18	482.24	502.66	519.06	538.42
Steam	93.81	85.98	79.23	75.46	70.55
Cable	45.90	45.58	45.58	38.58	33.68
Horse	8.02	7.39	7.39	1.50	2.51
Total	607.91	621.19	634.86	634.60	645.16
ACCORDING TO CONTROLLING AUTHORITY.					
Government	448.65	459.45	423.56	421.42	431.05
Municipal	113.25	115.73	165.54	167.42	168.70
Private	46.01	46.01	45.76	45.76	45.41
Total	607.91	621.19	634.86	634.60	645.16
ACCORDING TO GAUGE.					
Gauge—					
5 ft. 3 in.	5.18	5.18	5.18	5.18	5.18
4 ft. 8½ in.	490.85	499.91	512.59	517.92	526.61
3 ft. 6 in.	94.50	98.72	99.71	99.00	100.87
2 ft. 0 in.	17.38	17.38	17.38	12.50	12.50
Total	607.91	621.19	634.86	634.60	645.16

The mileage of electric tramways has steadily increased during the period dealt with above, due principally to the conversion of the Newcastle steam tramways and the Melbourne cable systems to electrical traction. The decrease in the Government-controlled tramways in 1925 was in some measure due to the transfer of the Brisbane tramways from the Brisbane Tramway Trust to the Brisbane City Council.

(iii) *Cost of Construction and Equipment.* The table hereunder shows, as far as information is available, the total cost of construction and equipment of all tramways to the 30th June, 1927, classified according to the nature of the motive power and the controlling authority.

TRAMWAYS.—COST OF CONSTRUCTION AND EQUIPMENT, 1926-27.

Nature of Motive Power.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
GOVERNMENT.							
	£	£	£	£	£	£	£
Electric	10,779,696	4,976,924	..	..	983,140	..	16,739,760
Steam ..	519,354	..	..	..	77,608	..	596,962
Cable ..	..	1,729,398	..	..	..	..	1,729,398
Horse ..	..	..	..	..	18,515	..	18,515
Total ..	11,299,050	6,706,322	..	..	1,079,263	..	19,084,635
MUNICIPAL.							
Electric	..	..	2,050,155	3,073,359	163,519	561,857	5,848,890
Steam ..	..	..	53,129	..	..	..	53,129
Total ..	..	..	2,103,284	3,073,359	163,519	561,857	5,902,019

TRAMWAYS.—COST OF CONSTRUCTION AND EQUIPMENT, 1926–27—*continued.*

Nature of Motive Power.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
PRIVATE.							
	£	£	£	£	£	£	£
Electric	..	412,730	..	..	452,446	..	865,176
Steam ..	(*a*)	..	..	..	..	..	..
Total ..	(*a*)	412,730	..	..	452,446	..	865,176
ALL CONTROLLING AUTHORITIES.							
Electric	10,779,696	5,389,654	2,050,155	3,073,359	1,599,105	561,857	23,453.826
Steam ..	(*b*) 519,354	..	53,129	..	77,608	..	650.091
Cable ..	..	1,729,398	..	..	..	..	1,729.398
Horse ..	..	..	..	..	18,515	..	18,515
Total ..	11,299,050 (*b*)	7,119,052	2,103,284	3,073,359	1,695.228	561,857	25,851,830

(*a*) Not available. (*b*) Incomplete.

2. **New South Wales.**—(i) *Government Tramways.* (*a*) *General.* The tramways, with some comparatively unimportant exceptions, are the property of the Government, and are under the control of the Railway Commissioners. In Sydney and suburbs the Government tramways are divided into seven distinct systems, five of which are operated by electricity and two by steam. The conversion of the Newcastle system from steam to electric traction has been undertaken, and at 30th June, 1927, 23.74 miles (route) were completed and opened for traffic.

(*b*) *Particulars of Working.* The subjoined statement gives particulars of the working of the electric and steam tramways under Government control in 1926–27 :—

GOVERNMENT TRAMWAYS.—NEW SOUTH WALES.—RETURNS FOR 1926-27.

Line.	Mileage Open for Traffic.		Total Cost of Construction and Equipment. (*a*)	Gross Revenue.	Working Expenses.	Net Earnings.	Interest.	Profit or Loss.	Percentage of Working Expenses on Gross Revenue.	Percentage of Net Earnings on Capital Cost.
	Route.	Track.								
	Miles.	Miles.	£	£	£	£	£	£	%	%
Electric	185.85	330.85	10,779,696	3,733,907	3,284,594	449,313	545,702	−96,389	87.97	4.17
Steam ..	42.65	45.47	519,354	72,191	203,240	−131,049	27,751	−158,800	281.53	−25.23
Total	228.50	376.32	11,299,050	3,806,098	3,487,834	318,264	573,453	−255,189	91.64	2.82

(*a*) Exclusive of Stores Advance Account (£287,000).

(c) *Capital Cost.* The capital cost shown in the preceding table was made up as follows :—

GOVERNMENT TRAMWAYS.—NEW SOUTH WALES.—CAPITAL COST, 1927.

Permanent Way.	Rolling Stock.	Power-houses, Sub-stations, and Plant.	Machinery.	Workshops.	Furniture.	Total.
£	£	£	£	£	£	£
5,733,942	2,542,833	2,509,786	250,099	259,998	2,392	11,299,050

The average cost per mile open was £25,094 for permanent way, and £24,355 for all other charges, making a total of £49,449 per route mile.

(d) *Summary, Government Tramways.*—The following table gives a summary of the operations of all Government tramways for the years 1923 to 1927 :—

GOVERNMENT TRAMWAYS.—NEW SOUTH WALES.—SUMMARY, 1923 TO 1927.

Year ended 30th June—	Mileage Open for Traffic. (Route.)	Total Cost of Construction and Equipment.	Gross Revenue.	Working Expenses.	Net Earnings.	Interest.	Percentage of Working Expenses on Gross Revenue.	Percentage of Net Earnings on Capital Ccst.	Passengers carried.	Persons employed.
	Miles.	£	£	£	£	£	%	%	No. ,000	No.
1923 ..	224.90	9,975,031*a*	3,598,114	3,092,306	505,808	500,274	85.94	5.08	331,002	9,897
1924 ..	227.57	10,471,958*a*	3,633,915	3,091,531	542,384	532,187	85.07	5.18	340,803	11,264
1925 ..	228.46	10,844,454*a*	3,619.272	3,174,862	444,410	546,489	87.72	4.10	339,577	11,633
1926 ..	228.55	11,147,523*a*	3,619,496	3,319,996	299,500	563,137	91.73	2.69	339,412	11,459
1927 ..	228.50	11,299,050*a*	3,806,098	3,487,834	318,264	573,453	91.64	2.82	347,231	11,697

(*a*) £47,455 of this sum has been paid from the Consolidated Revenue, and no interest is payable thereon.

The cost of construction and equipment is exclusive of the amount of the Stores Advance Account (£287,000).

The net result in 1927, after providing for all working expenses and £573,453 for interest on the capital invested, was a loss of £255,189, as compared with a loss of £263,637 in the preceding year. During the year 1926–27, 347,231,000 passengers were carried, an increase of 7,819,000 as compared with the previous year.

(e) *Sydney Tramways.* Official Year Book No. 15, p. 589, gave a short account of the progress of the Sydney Tramway System. Owing to limitations of space this information cannot be repeated, but the subjoined table shows certain important particulars for the years 1923 to 1927 inclusive.

ELECTRIC TRAMWAYS.—SYDNEY.—SUMMARY, 1923 TO 1927.

Particulars.	Year ended 30th June—				
	1923.	1924.	1925.	1926.	1927.
Mileage open for traffic—					
Route miles	158.99	160.51	161.24	161.83	164.11
Track miles	283.28	296.10	287.52	288.85	289.19
Total cost of construction and equipment .. .. £	8,680,161	8,955,747	9,168,939	9,473,497	9,889,857*b*
Current used for traction purposes kilowatt hours	88,655,678	96,448,720*a*	118,031,086*a*	109,131,602*a*	123,197,596*a*
Tram-miles run .. No.	28,562,113	30,318,516	31,238.517	31,087,894	31,086,469
Passengers carried .. No.	312,930,225	320,402,789	314,563,586	313,216,842	320,903,528
Gross revenue .. £	3,375,923	3,391,626	3,331,701	3,316.312	3,462,806
Working expenses .. £	2,759,914	2,781,148	2,823,510	2,878,855	3,066,254
Net revenue .. .. £	616,009	610,478	508,191	437,457	396,552
Percentage of working expenses on gross revenue .. %	81.75	82.00	84.75	86.81	88.55
Cars in use	1,531	1,570*a*	1,562*a*	1,567*a*	1,594*a*
Persons employed	9,150	10,608*a*	10,255*a*	11,130*a*	11,512*a*

(*a*) Includes portion of Newcastle line in process of electrification. (*b*) Includes Stores Advance Account.

(ii) *Private Tramways.* A private steam tramway passes through the township of Parramatta. Commencing at the park gates, it runs as far as the Duck River, a distance of 3½ miles, where it connects with the Parramatta River steamers which convey passengers and goods to and from Sydney. This line, which has a gauge of 4 ft. 8½ in., was opened for traffic in 1883. In 1927 the number of tram-miles run was 18,200, and the number of passengers conveyed 134,898.

3. Victoria.—(i) *General.* In Melbourne there are several tramway systems carried on under the control of various authorities, the most important being the cable and electric systems worked by the Melbourne and Metropolitan Tramways Board, to which reference will be made further on. There were also, at 30th June, 1927, two lines of electric tramways, viz. :—(*a*) St. Kilda to Brighton, and (*b*) Sandringham to Beaumaris, both of which belong to and are operated by the Railways Commissioners. In addition there are systems of electric tramways at Ballarat, Bendigo, and Geelong, constructed and run by private companies.

Numerous tramways have been constructed for special purposes in various parts of the State under the provisions of the Tramway Act 1890. These, however, are of the nature of the private railways referred to in sub-section 1 hereof.

(ii) *Melbourne and Metropolitan Tramways Board.* (*a*) *General.* A short account of the formation of the Melbourne Tramway and Omnibus Company, and of the Tramways Board, will be found in earlier issues of this work.

(*b*) *Cable and Horse Tramways.* (1) *Services.* The complete system consists of 33.68 miles of double track of 4-ft. 8½-in. gauge connecting the City of Melbourne with the nearer suburbs. The service (horse-drawn) to Royal Park was abandoned in 1923.

(2) *Particulars of Working.* A summary for the years 1923 to 1927 is given hereunder :—

CABLE TRAMWAYS.—MELBOURNE.—SUMMARY, 1923 TO 1927.

Year ended 30th June—	Mileage Open (Route).			Mileage Run during Year.			Number of Passengers Carried.		
	Cable.	Horse.	Total.	Tram.		Total.	Tram.		Total.
				Cable.	Horse.		Cable.	Horse.	
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	No.	No.	No.
1923 ..	45.90	0.63	46.53	14,832,416	9,808	14,842,224	155,617,351	202,802	155,820,153
1924 ..	45.58	(*a*)	45.58	14,713,853	3,066	14,716,919	147,750,286	50,220	147,800,506
1925 ..	45.58	(*a*)	45.58	15,285,913	..	15,285,913	148,316,398	..	148,316,398
1926 ..	38·58	(*a*)	38.58	12,393,911	..	12,393,911	127,882,115	..	127,882,115
1927 ..	33.68	(*a*)	33.68	9,817,468	..	9,817,468	99,978,416	..	99,978,416

Year ended 30th June—	Gross Revenue.			Working Expenses.			Percentage of Working Expenses on Revenue.	No. of Employees at end of Year.
	Tram.		Total.	Tram.		Total.		
	Cable.	Horse.		Cable.	Horse.			
	£	£	£	£	£	£	%	No.
1923	1,260,043	869	1,260,912	923,564	1,225	924,789	73.34	3,035
1924	1,190,594	241	1,190,835	990,196	373	990,569	83.18	3,295
1925	1,192,103	..	1,192,103	1,011,630	..	1,011,630	84.86	3,136
1926	1,048,414	..	1,048,414	847,102	..	847,102	80.79	2,520
1927	1,012,946	..	1,012,946	702,749	..	702,749	69.38	2,014

(*a*) Line abandoned from 16th November, 1923.

The reduction in mileage open and of the operating results as compared with the previous year is due to the progress made in the scheme of conversion to electrical traction.

(*e*) *Electric Tramways.* (1) *Services Operated.* The system controlled by the Melbourne and Metropolitan Tramways Board at 30th June, 1927, consisted of six services, viz., (*a*) The Prahran and Malvern Tramways; (*b*) The Hawthorn Tramways; (*c*) The Melbourne, Brunswick and Coburg Tramways; (*d*) The Fitzroy, Northcote and Preston Tramways; (*e*) The Footscray Tramways; and (*f*) the North Melbourne–Essendon Tramway, all of 4-ft. 8½-in. gauge.

(2) *Particulars of Working.* A summary of operations for the year 1926–27 is given hereunder:—

MELBOURNE TRAMWAYS BOARD.—ELECTRIC SERVICES.—OPERATIONS, 1923-24 TO 1926-27.

Year ended 30th June—	Mileage open for Traffic (Route.)	Total Cost of Construction and Equipment	Current used for Traction Purposes.	Tram-Miles Run.	Passengers Carried.	Gross Revenue.	Working Expenses.	Interest.	Net Profit.
	Miles.	£	Kilowatt-hours.	No.	No.	£	£	£	£
1923 ..	71.51	2,185,275	15,863,159	6,742,428	70,811,393	661,486	503,166	80,129	78,191
1924 ..	72.19	2,409,281	16,900,525	7,267,966	74,091,564	692,220	576,427	85,856	29,937
1925 ..	82.50	3,242,485	20,297,259	8,426,519	80,435,680	756,163	649,644	79,482	27,037
1926 ..	91.98	4,040,492	27,041,867	10,657,728	99,017,938	1,007,210	816,178	147,997	43,035
1927 ..	102.14	4,647,497	34,393,346	13,387,869	118,858,967	1,429,015	963,558	240,922	224,535

(iii) *Other Government Tramways.* The Victorian Railway Department owns and operates two lines of electric street railways, viz., St. Kilda to Brighton (5.18 miles of 5-ft. 3-in. gauge) and Sandringham to Beaumaris (4.61 miles of 4-ft. 8½-in. gauge), a total route mileage of 9.79 miles.

Particulars of the operations of these tramways for the years 1922–23 to 1926–27 are contained in the tables hereunder.

ELECTRIC TRAMWAY.—ST. KILDA–BRIGHTON.—1923 TO 1927.

Year ended 30th June—	Total Cost of Construction and Equipment.	Current used for Traction Purposes.	Tram-Miles Run.	Passengers Carried.	Gross Revenue.	Working Expenses.	Interest.	Net Profit or Loss.
	£	Kilowatt-hours.	No.	No.	£	£	£	£
1923 ..	188,423	1,377,116	504,098	5,750,912	54,194	42,598	8,893	2,703
1924 ..	190,501	1,433,904	523,950	5,709,684	54,381	45,497	8,937	— 53
1925 ..	193,316	1,524,151	562,220	5,737,101	58,038	48,942	8,911	185
1926 ..	193,607	1,580,283	564,085	5,910,741	56,533	48,534	9,277	— 1,278
1927 ..	195,403	1,640,932	568,184	5,856,796	55,594	48,079	9,347	— 1,832

(—) Indicates loss.

ELECTRIC TRAMWAY.—SANDRINGHAM–BEAUMARIS (*a*).—1923 TO 1927.

Year ended 30th June—	Total Cost of Construction.	Current used for Traction Purposes.	Tram-Miles Run.	Passengers Carried.	Gross Revenue.	Working Expenses.	Interest.	Net Profit or Loss.
	£	Kilowatt-hours.	No.	No.	£	£	£	£
1923 ..	86,974	245,130	125,274	1,411,885	12,531	9,607	4,783	— 1,859
1924 ..	94,390	301,850	126,436	1,459,239	12,971	12,623	5,148	— 4,800
1925 ..	101,417	335,140	127,962	1,475,261	13,048	10,699	5,326	— 2,977
1926 ..	99,677	330,390	127,368	1,371,558	12,061	13,233	5,514	— 6,686
1927 ..	134,024	464,356	182,331	1,809,880	15,209	15,198	6,556	— 6,545

(—) Indicates loss.

(*a*) The extension from Black Rock to Beaumaris, 2.20 miles in length, was opened for traffic on 1st September, 1926.

(iv) *Private Tramways.* Two systems of tramways are owned and operated by private companies, viz., Ballarat and Bendigo (21.25 miles) and Geelong (6.35 miles); giving a total route mileage of 27.60 miles. Electrical traction is used on each of these lines which are constructed to the 4-ft. 8½-in. gauge.

(v) *Summary for all Electric Tramways.* The following table gives particulars of the working of all electric tramways in Victoria for each year from 1923 to 1927 inclusive :—

ELECTRIC TRAMWAYS.—VICTORIA.—SUMMARY, 1923 TO 1927.

Year ended 30th June—	Mileage open for Traffic (Route).	Total Cost of Construction and Equipment.	Current Used for Traction Purposes.	Tram-Miles Run.	Passengers Carried.	Gross Revenue.	Working Expenses.	Cars in Use.	Persons Employed.
	Miles.	£	Kilowatt-hours.	No.	No.	£	£	No.	No.
1923	106.79	2,795,547	19,114,007	8,585,756	86,027,005	816,984	624,852	310	2,190
1924	107.47	3,046,443	20,390,335	9,192,499	88,902,067	844,189	709,293	353	2,729
1925	117.69	3,913,353	24,114,494	10,472,995	95,806,588	910,601	785,175	421	3,003
1926	127.17	4,716,775	31,020,604	12,709,671	114,692,993	1,159,557	960,485	492	3,607
1927	139.53	5,389,654	38,582,105	15,504,164	135,153,262	1,588,838	1,108,664	530	4,087

4. **Queensland.**—(i) *General.* The electric tramways in the city and suburbs of Brisbane were controlled by a private company, with head office in London, until the 31st December, 1922, on which date they were purchased by the Queensland Government which, under the provisions of the Brisbane Tramway Trust Act, 1922, appointed a Trust to control and operate the system until 1st December, 1925, on which date the control passed to the Brisbane City Council. Under the provisions of the Brisbane City Council Act, 1925, the Council took over the liabilities of the Tramway Trust to the extent of £2,000,000 which had been incurred in London, and assumed complete control of the system. The total length of the Brisbane tramways was 53.53 route miles at 31st December, 1927. A steam tramway having a length of 6.65 route miles is in operation at Rockhampton.

(ii) *Brisbane Electric Tramways.* These tramways are run on the overhead trolley system, the voltage of the line current being 550. Cost of construction and equipment to the end of the year 1927 was £2,050,155, the gauge of line being 4-ft. 8½-in. The following table gives a summary for the calendar years 1923 to 1927 :—

ELECTRIC TRAMWAYS.—BRISBANE.—SUMMARY, 1923 TO 1927.

Year ended 31st Dec.—	Mileage open for Traffic (Route).	Total Cost of Construction and Equipment.	Current Used for Traction Purposes.	Tram-Miles Run.	Passengers Carried.	Gross Revenue.	Working Expenses.	Cars in Use.	Persons Employed.
	Miles.	£	Kilowatt-hours.	No.	No.	£	£	No.	No.
1923	43.06	1,431,799	11,919,254	5,211,971	74,721,594	628,841	474,202	182	1,301
1924	47.13	1,615,282	12,656,077	5,457,800	78,367,194	663,747	503,131	201	1,731
1925	50.33	1,846,029	14,800,083	5,915,844	82,514,979	707,500	564,584	225	1,837
1926	52.25	(b)2,053,318	15,683,288	6,301,126	81,802,945	767,708	588,262	248	1,821
1927	53.53	2,050,155	17,409,241	6,535,833	78,057,620	814,312	613,285	260	1,659

(*a*) To 31st December, 1921. (*b*) Includes motor omnibuses.

(iii) *Rockhampton Municipal Tramway.* This tramway was opened for traffic in 1909, the motive power being steam. The length of line is 6.65 route miles, and the gauge 3 ft. 6 in. The capital cost to 31st December, 1927, was £53,129. During the year 1927, 1,786,927 passengers were carried, the revenue being £16,891 and working expenses £17,923. The number of the staff at the end of the year was 44.

(iv) *Sugar-Mill Tramways.* In various parts of Queensland there are tramways used in connexion with the sugar-milling industry, chiefly for the purpose of hauling cane. Some of these lines are of a permanent nature, running through sugar-cane plantations, while others are portable lines running to various farms. The total length of these lines is included in the table relating to private railways given on a preceding page.

5. South Australia.—(i) *Electric Tramways.* The tramways in Adelaide and suburbs are controlled by a Municipal Tramways Trust created in 1907. Prior to this year, the system was run with horse-traction by several private companies. Electric traction was inaugurated in 1909, and at the 31st July, 1927, the Tramways Trust operated a total route mileage of 73.05 miles of 4-ft. 8½-in. gauge. A summary for the years 1923 to 1927 is given in the subjoined table :—

ELECTRIC TRAMWAYS.—ADELAIDE.—SUMMARY, 1923 TO 1927.

Year ended 31st July—	Mileage Open for Traffic (Route).	Total Cost of Construction and Equipment.	Current Used for Traction Purposes.	Tram-Miles Run.	Passengers Carried.	Gross Revenue.	Working Expenses.	Cars in Use.	Persons Employed.
	Miles.	£	Kilowatt-hours.	No.	No.	£	£	No.	No.
1923	71.71	2,512,048	13,700,385	6,155,033	59,648,362	612,839	430,474	218	1,422
1924	73.83	2,742,985	15,705,191	6,568,985	61,737,665	638,277	463,481	231	1,583
1925	72.20	2,874,037	18,456,574	7,222,292	63,152,810	640,335	467,751	249	1,563
1926	73.05	2,997,976	19,303,228	7,393,122	66,207,356	661,058	472,412	255	1,556
1927	73.05	3,073,359	19,956,323	7,386,620	67,569,749	674,884	483,939	259	1,690

(ii) *Horse Tramways.* There are also 19.86 miles of Government horse-tramways in country districts, worked in connexion with the railway system, of which 17.36 miles are used for passenger service, and 2.50 miles for special purposes.

6. Western Australia.—(i) *Government Tramways.* (*a*) *General.* Apart from the electric tramways, there are several Government tramways, with a total length of 20.26 miles. The lines are under the control of the Department of the North-West, and the longest is that between Roebourne and Cossack, constructed on a 2-ft. gauge, with a length of 12.50 miles, and worked by steam. This line was, however, not in operation at 30th June, 1927. The remaining 7.88 miles are made up of several short lengths worked by steam or horses in connexion with the jetties at certain ports, and providing communication between the jetties and the goods sheds or warehouses.

(*b*) *Steam and Horse Tramways.* The capital cost of the Government steam or horse tramways up to the 30th June, 1927, was £96,123, the gross revenue for 1926–27 being £3,475, and the working expenses £2,331. These amounts are in some instances inclusive of revenue from jetty charges and of working expenses in connexion with such services.

(*c*) *Perth Electric Tramways.* These tramways were opened for traffic by a private company on the 24th September, 1899, and the system was subsequently extended to many of the suburbs. Control was taken over by the Government on the 1st July, 1913, and the tramways are now worked in conjunction with the Government railways. The gauge of line is 3 ft. 6 in. The following table shows particulars of working for the years ended 30th June, 1923 to 1927 :—

ELECTRIC TRAMWAYS.—PERTH.—1922-23 TO 1926-27.

Year ended 30th June—	Mileage open for Traffic.	Total Cost of Construction and Equipment.	Current Used for Traction Purposes.	Tram-Miles Run.	Passengers Carried.	Gross Revenue.	Working Expenses.	Cars in Use.	Persons Employed.
		£	Kilowatt-hours.	No.	No.	£	£	No.	No.
1923 ..	30.38	850,965	7,285,200	2,770,518	25,993,983	262,689	213,928	103	551
1924 ..	34.24	879,277	8,061,920	2,989,089	27,893,315	274,583	231,895	103	529
1925 ..	34.28	899,741	8,296,746	3,040,505	28,894,525	281,612	236,008	113	566
1926 ..	34.34	949,929	8,246,630	3,010,253	29,599,785	286,707	240,953	113	536
1927 ..	36.68	983,140	8,371,890	2,995,769	30,541,079	294,068	241,280	113	725

(ii) *Private Tramways.* Electric tramways with a route mileage at 31st August, 1927, of 8.61 miles, and controlled by the municipal authorities, are in operation in Fremantle. In Kalgoorlie and Boulder a private company controls the electric tramways, of which at the end of 1927 the length of line was 14.31 miles (route). All the foregoing lines are of 3-ft. 6-in. gauge.

(iii) *Summary, all Electric Tramways.* The subjoined table gives a summary for all electric tramway systems in the State for the years 1923 to 1927 :—

ELECTRIC TRAMWAYS.—WESTERN AUSTRALIA.—SUMMARY, 1923 TO 1927.

Year.	Mileage open for Traffic (Route).	Total Cost of Construction and Equipment.	Current Used for Traction Purposes.	Tram-Miles Run.	Passengers Carried.	Gross Revenue.	Working Expenses.	Cars in Use.	Persons Employed.
	Miles.	£	Kilowatt-hours.	No.	No.	£	£	No.	No.
1923	53.81	1,442,094	9,326,907	3,637,126	33,838,351	350,412	281,566	166	722
1924	57.67	1,477,033	10,117,198	3,939,689	36,484,855	360,883	301,920	160	702
1925	57.55	1,504,845	10,389,250	3,975,699	37,237,791	365,156	306,378	173	751
1926	57.61	1,559,483	10,311,919	3,940,741	37,841,434	368,290	311,772	173	709
1927	59.60	1,599,105	10,237,513	3,939,061	38,924,077	376,578	310,967	173	891

7. **Tasmania.**—(i) *Electric Tramways.* In Hobart there is a system of electric tramways consisting of 16.61 route miles of 3-ft. 6-in. gauge controlled by the Hobart Municipal Council. The Launceston City Council operates tramways in Launceston having a length of 10.25 miles of 3-ft. 6-in. gauge.

The following table gives a summary of the working of the two systems for the years 1923 to 1927 :—

ELECTRIC TRAMWAYS.—TASMANIA.—SUMMARY, 1923 TO 1927.

Year	Mileage open for Traffic (Route).	Total Cost of Construction and Equipment.	Current Used for Traction Purposes.	Tram-Miles Run.	Passengers Carried.	Gross Revenue.	Working Expenses.	Cars in Use.	Persons Employed.
	Miles.	£	Kilowatt-hours.	No.	No.	£	£	No.	No.
1923	26.28	517,983	3,447,310	1,747,974	16,499,999	177,057	132,011	74	438
1924	26.64	541,941	3,439,420	1,890,882	17,683,824	192,772	144,841	82	430
1925	26.75	566,717	3,510,994	1,886,231	17,725,007	180,345	137,002	90	399
1926	26.86	542,309	3,310,493	1,776,052	16,972,174	178,191	142,141	89	385
1927	26.86	561,857	3,332,102	1,791,276	17,009,211	181,445	140,386	89	367

(ii) *Other Tramways.* There are several lines of privately-owned steam tramways. These are dealt with in § 5, Private Railways, as they do not come within the category of street tramways for the conveyance of passengers.

8. **Electric Tramways, Australia.**—(i) *Summary for 1927.* The subjoined table gives details regarding all electric tramways in Australia. The returns for tramways in Ballarat and Bendigo, in Brisbane, in Kalgoorlie, and in Hobart are for the calendar year 1927 ; for other tramways they refer generally to the financial year 1926–27.

ELECTRIC TRAMWAYS.—AUSTRALIA.—SUMMARY, 1926-27.

State.	Mileage open for Traffic (Route).	Total Cost of Construction and Equipment.	Current used for Traction purposes.	Tram-Miles Run.	Passengers Carried.	Gross Revenue.	Working Expenses.	Percentage of Working Expenses on Gross Revenue.	Cars, Motors and Trailers.	Persons Employed.
	Miles.	£	Kilowatt-hours.	No.	No.	£	£	%	No.	No.
N.S.W. ..	185.85	10,779,696	123,197,596	33,569,303	341,003,046	3,733,907	3,284,594	87.97	1,594	11,512
Victoria ..	139.53	5,389,654	38,582,105	15,504,164	135,153,262	1,583,838	1,108,664	70.00	530	4,087
Q'land ..	53.53	2,050,155	17,409,241	6,535,833	78,057,620	814,312	613,285	75.31	260	1,659
S. Aust.	73.05	3,073,359	19,956,323	7,386,620	67,569,749	674,884	483,939	71.71	259	1,690
W. Aust.	59.60	1,599,105	10,237,513	3,939,061	38,924,077	376,578	310,967	82.58	173	891
Tasmania	26.86	561,857	3,332,102	1,791,276	17,009,211	181,445	140,386	77.37	89	367
All States	538.42	23,453,826	212,714,880	68,726,257	677,716,965	7,364,964	5,941,835	80.68	2,905	20,206

The percentage of working expenses on gross revenue for all electric tramways in Australia was 80.68, ranging from 70.00 in the case of Victoria to 87.97 in the case of New South Wales.

(ii) *Summary for Years 1923 to 1927.* The following table gives particulars of the operations of electric tramways in Australia for the years 1923 to 1927 :—

ELECTRIC TRAMWAYS.—AUSTRALIA.—1923 TO 1927.

Particulars.	1923.(*a*)	1924.	1925.	1926.	1927.
Mileage open for Traffic (Route) Miles	460.18	482,24	502.66	519.06	538.42
Total Cost of Construction and Equipment .. .. £	17,587,960	19,206,509	21,007,915	22,444,569	23,453,826
Current used for Traction Purposes .. .. Kil. hrs.	146,387,481	158,756,941	189,302,481	188,761,134	212,714,880
Tram-miles run .. .. No.	53,790.529	57,725,334	61,941,856	65,302,995	68,726,257
Passengers carried .. .. ,,	580,472,975	606,673,314	621,691,985	647,351,333	677,716,965
Gross Revenue .. .. £	5,908,303	6,123,275	6,248,686	6,633,563	7,364,964
Working Expenses .. .. £	4,675,289	4,930,302	5,170,814	5,510,118	5,941,835
Percentage of Working Expenses on Gross Revenue .. .. %	79.13	80.51	82.75	83.06	80.68
Cars, Motors and Trailers .. No.	2,487	2,598	2,720	2,824	2,905
Persons Employed .. .. ,,	15,101	17,783	17,808	19,208	20,206

(*a*) Includes Queensland for the year ended 31st December, 1922.

During the five years included in the above table the percentage of working expenses on the gross revenue of all electric tramways in Australia reached a maximum of 83.06 in 1926, after a steady increase from a minimum of 79.13 in 1923, but in 1927 a decided drop to 80.68 was recorded. The average over the whole period was 81.26 per cent.

D. AIRCRAFT.

1. Historical.—A short review of the progress of civil aviation in Australia up to the date of foundation of the Department of Civil Aviation was given in Official Year Book No. 16, pp. 334–5, but limitations of space preclude its repetition in the present volume.

2. Foundation of Civil Aviation Department.—(i) *Creation of.* A brief account of the foundation and the objects of this Department will be found in Official Year Book No. 19, page 299.

(ii) *Accidents Investigation Committee.* Under powers conferred by the *Air Navigation Act* 1920, a committee consisting of engineering and aircraft experts was appointed early in 1927 to inquire into and report upon accidents which occur to service and civil aircraft, and on 13th October, 1927, the Air Navigation (Investigation of Accidents) Regulations were promulgated.

3. Activities of Civil Aviation Department.—(i) *Aerodromes and Landing Grounds.* Amongst the various activities have been the acquisition and preparation of civil aviation landing grounds, which have now been established over the following approved routes :—(*a*) Perth to Derby (1,467 miles); (*b*) Adelaide to Sydney (790 miles); (*c*) Sydney to Brisbane (550 miles); (*d*) Brisbane to Toowoomba (75 miles); (*e*) Charleville to Camooweal (825 miles); (*f*) Cloncurry to Normanton (215 miles); (*g*) Melbourne to Hay (233 miles); (*h*) Mildura to Broken Hill (189 miles); and (*i*) Melbourne to Charleville via Cootamundra (900 miles).

Preliminary surveys of the following routes also have been made, but no expenditure has yet been incurred in the preparation of landing grounds in connexion therewith :—(*a*) Adelaide to Perth (1,500 miles); (*b*) Adelaide to Port Lincoln, via Yorke Peninsula (for seaplanes), (200 miles); (*c*) Melbourne to Launceston via (1) Flinders Island and North-East coast of Tasmania (293 nautical miles), and (2) via King Island and North-West Coast (299 nautical miles); (*d*) Charleville to Toowoomba (375 miles); (*e*) Camooweal to Daly Waters (475 miles); and (*f*) Derby to Wyndham (550 miles). Of these proposed routes it is anticipated that (*a*), (*d*) and (*e*) will be fully provided with aerodromes and emergency landing grounds before the end of 1928.

The Royal Australian Air Force has surveyed and prepared for use a service route from Camooweal to Port Darwin, via Anthony's Lagoon, Newcastle Waters, and Katherine.

Up to the present 140 landing grounds have been acquired or leased, and prepared for civil aviation purposes. There are 12 private licensed aerodromes also in use.

(ii) *Aerial Services.* (*a*) *General.* In addition to providing a regular and speedy transport service over fixed routes, it was considered that the granting of contracts for subsidized aerial services would give an impetus to the development of civil aviation in Australia, while the trained flying and ground personnel would provide a technical reserve for air defence in case of war.

At 31st March, 1928, three subsidized contractors were operating under contracts which provided that up to 100 lb. of mail is to be carried free on each trip, the letters for transmission being surcharged 3d. per ½ ounce.

The various regular air services over prepared routes have completed 1,850,000 passenger-miles, and carried 12,000 paying passengers over various stages. Over 1,300,000 letters have also been carried.

All pilots and mechanics employed on these services must join the Air Force Reserve when the Reserve is constituted.

(*b*) *Aerial Mail Services at 31st March, 1928.* The following aerial mail services were in operation at 31st March, 1928.

(i) *Perth to Derby—Western Australia.*

This service, covering a distance of 1,467 miles, is carried out by the West Australian Airways Limited, machines leaving Perth on Saturdays and returning on Thursdays. Landing places for mails are—Perth, Geraldton, Carnarvon, Onslow, Roebourne, Whim Creek, Port Headland, Broome, and Derby.

This service has been in operation for more than six years and is of inestimable value to residents of the north-west coast who freely avail themselves of the facilities for transport and communication which it provides.

The number of letters carried during the first month's operations was 577, but it has increased to about 20,000 per month.

(ii) *Charleville to Camooweal and Cloncurry to Normanton—Queensland.*

These services are operated by the Queensland and Northern Territory Aerial Services Limited. The former route covers 825 miles, and links up the western terminals of three main railway lines in Western Queensland, viz., Charleville, Longreach, and Cloncurry. The latter route (220 miles in length) links up with the main Charleville–Camooweal service at Cloncurry. The landing places for mails are—Charleville, Tambo, Blackall, Longreach, Winton, McKinlay, Cloncurry, Mt. Isa, and Camooweal.

The original contract which provided for a weekly (return) service between Charleville and Cloncurry commenced on 2nd November, 1922, and the service was extended to Camooweal on 7th February, 1925.

The service has been maintained successfully, and is greatly appreciated by residents of Western Queensland and the Northern Territory. Passenger bookings have shown a steady increase since the service was instituted.

(iii) *Adelaide–Cootamundra, Hay–Melbourne and Mildura–Broken Hill Services.*

Services have been regularly maintained over these routes since July, 1925, by the Larkin Aircraft Supply Co. Ltd., which previously operated a service between Adelaide and Sydney (790 miles) for a period of twelve months. The current contract with the company provides for (*a*) a weekly service in each direction between Adelaide and Cootamundra (578 miles) via Mildura, Hay and Narrandera ; (*b*) a service twice a week in each direction between Hay and Melbourne (233 miles) via Deniliquin and Echuca ; and (*c*) a service twice a week in each direction between Mildura and Broken Hill (189 miles).

(*c*) *Future Services.* The Commonwealth Government has approved of a special appropriation of £200,000 for the further development of civil aviation in Australia and, as a result, it will probably be possible to subsidize the regular operation of commercial aircraft over four or more of the following new routes, viz. :—Perth–Adelaide (1,500 miles), Camooweal–Daly Waters (475 miles), Derby–Wyndham (550 miles), Melbourne–Hobart (425 miles), Charleville–Brisbane (450 miles) and Sydney–Brisbane (550 miles). Tenders have been called for the operation of the Perth–Adelaide service which will necessitate the introduction of regular night flying in the Commonwealth. By co-ordinating the existing railway and steamship services overseas correspondents in Sydney and Melbourne will thus be enabled to gain one week in the conveyance of their English mails.

The route mileage of existing services is 3,292 miles, but when the new lines are in operation this figure will be increased to over 7,000 miles, practically encircling Australia.

4. **Aircraft Construction.**—(i) *Experimental Work.* An important stage in aircraft development in Australia was reached with the successful completion of the official tests of a flying boat designed by Squadron Leader E. J. Wackett, D.F.C., A.F.C., R.A.A.F. This machine, known as the " Widgeon," was ordered by the Civil Aviation Department. It embodies a number of features specially designed for local conditions, and, with the exception of the engine, was wholly built at the R.A.A.F. workshops. The maximum speed attained was 103 m.p.h. with an initial climbing rate of 510 feet per minute, while the total gross weight of machine with passengers (680 lb.) and fuel (380 lb.) was 3,960 lb. A retractable land under-carriage has been fitted to this machine, which has also passed its official tests as an " amphibian." During June, 1927, it was flown non-stop from Sydney to Melbourne (520 air miles) in 5 hours 45 minutes, proving absolutely airworthy in every respect.

(ii) *Constructional activities.* Aircraft manufacture, though yet in its infancy, is making some substantial progress. Two of the subsidized aerial mail contracting companies in addition to effecting major repairs have, under permit from the De Haviland Aircraft Coy., constructed some DeH. 50A machines for use on their respective routes, the engines and certain metal parts being the only accessories imported. Another company has completed contracts for the supply to the R.A.A.F. of a number of airscrews, wings, &c.

5. **Training of Air Pilots.**—(i) *The Australian Aero Club.* The Australian Aero Club provides facilities for flying instruction and practice at a considerably lower cost than was possible prior to the advent of the light aeroplane. Since the end of 1926 the New South Wales and Victorian Sections have carried on active training, and in December, 1927, the South Australian Section began operations.

Assistance to the following extent is being provided each section by the Commonwealth Government :—(*a*) The loan of three De Haviland " Moth " aeroplanes with spare engines and parts ; (*b*) Bonus of £20 per pupil trained (*ab initio*) to a standard that will enable the pupil to obtain a " Private Pilot's " licence ; and (*c*) Free hangar accommodation and free use of aerodrome for clubs' activities. The State Sections of the Aero Club conduct their activities in the capital cities and the progress shown by the Sydney organization is particularly notable. The steadily increasing number of pupils has necessitated the employment of an assistant instructor, and the club has also acquired two additional " Moth " machines from its own funds. At 30th March, 1928, over 50 pupils, including several lady members, had graduated and been issued with Class " A " (Private) Pilots' licences. Furthermore, many graduates had completed courses of advanced training, and others again had attained to that stage of advanced flying which rendered them eligible for the issue of Class " B " (Commercial) licences.

(ii) *Commercial Companies.* Similar developments have also taken place in Perth, Longreach and Brisbane, where the aerial mail contractors conduct flying schools. A Bonus of £40 per pupil trained is paid to these companies, which provide the necessary aircraft, instructors, and hangars. The extension of this scheme to other centres is under consideration.

At the end of March, 1928, there were 185 pilots holding licences under the Air Navigation Regulations. This number included 76 " B," or commercial pilots, and 109 " A," or private pilots.

(iii) *Refresher Courses.* Qualified pilots who are employed or about to be employed in commercial aviation enterprises are accepted on the recommendation of the Controller of Civil Aviation for short refresher courses of flying instruction at the Flying Training School, Point Cook. No charge is made for this refresher instruction, the cost of which is also borne by Royal Australian Air Force Funds.

6. **Notable Flights.**—Since the end of the European war several notable flights from England to Australia have been carried out by Australian pilots.

The first was at the end of 1919 when Sir Ross and Sir Keith Smith, together with Sergeants J. M. Bennett and W. H. Shiers, completed the journey by air in 29 days, thereby winning the Commonwealth Government grant of £10,000 offered to the first pilot or pilots who should make the flight within a period of 30 days. The brothers

Smith received knighthoods, and Sergeants Bennett and Shiers were each awarded the Air Force Cross and honorary commissions in the Royal Australian Air Force in recognition of their performance.

Lieuts. R. J. Parer and J. C. McIntosh also completed the journey by air shortly afterwards, but not within the specified time, and Captain G. C. Matthews, A.F.C., and Sergeant T. D. Kay flew as far as Bali, where a serious mishap to the machine caused them to abandon the flight.

The fastest flight of all, however, was that of Mr. B. Hinkler who, in an Avro "Avian" machine, made the journey alone in 16 days. He left the Croydon Aerodrome at 4 a.m. on 7th February, 1928, and, after 15 successive flying days, arrived at Darwin at 5 p.m. on the 22nd February. As a mark of appreciation for his excellent performance the Commonwealth Government granted him a sum of £2,000, while His Majesty the King awarded him the Air Force Cross.

A further successful venture was that of Captain W. R. Lancaster and Mrs. K. Miller, who also made their flight in an Avro "Avian" machine, leaving England on 14th October, 1927, and arriving at Darwin on 20th March, 1928, after a journey beset with numerous hardships.

In 1926 Mr. Alan Cobham, an English pilot, reached Darwin 40 days after leaving England, and returned to England by aeroplane in 34 days.

Captain Kingsford Smith, accompanied by Mr. C. P. Ulm as relief pilot, Lieut. H. Lyon (America) as navigator, and Mr. J. Warner (America) as wireless officer, left San Francisco on 31st May, 1928, in a Fokker monoplane fitted with a 660 h.p. Wright "Whirlwind" engine on a flight across the Pacific Ocean to Brisbane. He arrived at Honolulu (2,100 miles) on 1st June, left Honolulu on 3rd June, and arrived at Suva (Fiji), a distance of 3,128 miles, on 5th June. He left Suva on 8th June and arrived at Brisbane on 9th June. The total distance covered in the flight was about 6,848 miles, and the flying time approximately 83 hours. The Commonwealth Government presented the aviators with a gift of £5,000, while the New South Wales Government provided £7,000, in recognition of this remarkable achievement.

7. **Statistical Summary.**—The collection and compilation of aircraft statistics were undertaken by the Commonwealth Bureau of Census and Statistics on the 1st July, 1922. The subjoined table gives a summary of operations in each State for the year ended 30th June, 1927, together with comparative figures for Australia for the year 1925–26 :—

AIRCRAFT.—SUMMARY, 1925-26 AND 1926-27.

Particulars.		State in which Aircraft Owners are Located.					Total.	
		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	1926–27.	1925–26.
Companies or persons owning aircraft ..	No.	10	12	6	1	1	30	22
Aeroplanes ..	No.	12	34	16	2	13	77	55
Staff employed(*a*)—								
Certificated pilots	No.	5	16	6	1	5	33	29
Others	No.	6	35	20	..	25	86	57
Flights carried out ..	No.	5,913	5,938	3,603	138	1,692	17,284	5,838
		h. m.	h. m.	h. m.	h. m.	h. m.	h. m.	h. m.
Hours flown ..		1,726 43	3,749 51	2,138 20	273 20	2,559 10	10,447 24	6,426 35
Approx. mileage	miles	120,740	269,836	163,725	22,505	195,837	772,643	487,603
Passengers carried—								
Paying	No.	4,468	4,918	2,100	(*b*)	2,498	13,984	4,174
Non-paying ..	No.	890	2,013	161	(*b*)	158	3,222	2,830
Total ..	No.	5,358	6,981	2,261	(*b*)	2,656	17,206	7,004
Goods, weight carried	lbs.	550	37,449	34,633	..	53,292	125,924	62,873
Mails, letters carried	No.	..	11,455	26,765	..	252,526	290,746	272,707
Accidents—								
Persons killed ..	No.	..	1	4	..	..	5	..
" injured ..	No.	1	1	1	..	..	3	1

(*a*) Monthly average. (*b*) Not available.

The particulars shown above for Victoria include flying carried out over three States on the Adelaide–Cootamundra; Melbourne–Hay; and Mildura–Broken Hill routes by the subsidized company whose head-quarters are in Melbourne.

E. MOTOR VEHICLES.

1. **The Motor Car and Motor Industry.**—(i) *Evolution of the Motor Car.* In the issue of the Year Book for 1927 (No. 20, p. 275) a short history of the evolution of the motor car is given, but consideration of space precludes its repetition in the current issue.

(ii) *Motor Industry.* The demand for mechanical transport occasioned by the recent European conflict was in no small measure responsible for the extensive development of the internal combustion engine, and the keen competition among motor car manufacturers for the overseas markets has improved the quality and efficiency of their products.

Although, as yet, motor cars are not entirely manufactured in Australia, the money invested in assembling and body building plants has assumed considerable proportions during recent years, and some idea of the value of Australia as a market for the motor trade is instanced by the fact that during the year 1926–27 the value of 12,843 motor bodies imported was £1,413,203, and of the 118,954 chassis, £12,292,749. The value of 88,876 bodies built in Australia to equip the chassis for which bodies were not imported was approximately £4,830,000. During the period July, 1923, to June, 1926, the import value of chassis and bodies had practically doubled itself, notwithstanding the fact that several price reductions have taken place. The value of the tyre equipment, both locally produced and imported, for which figures are not, however, available, must also be taken into consideration, particularly as the prevailing practice is for distributors to retail cars on a five-tyre basis. Fuels imported during the year for use in motor vehicles were—Crude petroleum, 78 million gallons, valued at £911,787, and petroleum, etc., 146 million gallons, valued at £6,648,567. Spares, batteries, accessories, etc., also are additional factors contributing to the potentialities of Australia as a market.

At the 30th June, 1927, the number of motor cars per 1,000 of population was over 80, which, however, is not as high as that recorded in New Zealand, viz., 122, so that it would appear that the saturation point has yet to be reached, and until that time, provided economic conditions maintain their stability, the marketing prospects remain at least as good as during the past decade.

2. **Registration.**—The arrangements for the registration of motor vehicles and the licensing of drivers and riders thereof are not uniform throughout Australia. Methods of registration, licence fees payable, etc., in each State were referred to in Official Year Book No. 16, pp. 337–340, and later issues, but limits of space preclude the repetition of this information in the present volume.

3. **Public Vehicles.**—In all the capital cities of the States and in many of the most important provincial centres taxi-cabs and other vehicles ply for hire under licence granted either by the Commissioner of Police or the Local Government authority concerned. As most of these vehicles are independently controlled by individuals or small companies, it has not been possible to obtain complete data in respect of their operations.

4. **Motor Omnibuses.**—Motor omnibus traffic, both in urban and provincial centres, has assumed considerable proportions during recent years, and prior to the constitution of Boards empowered to allocate routes over which omnibuses may operate, had a very marked effect on Railway and Tramway services. By regulating the licensing of motor omnibuses the economic waste arising from duplication of routes and services parallel with or contiguous to existing railway and tramway systems is avoided. The general principle governing the allocation of routes is that omnibus services should act as feeders to existing transport utilities. Revenue from licence fees is devoted principally to the maintenance or construction of roadways to enable them to withstand the wear and tear caused by the heavy traffic. Complete statistics regarding motor omnibus operations are, however, not at present available, but some indication of the effect of unrestricted motor omnibus services would have on the railways and tramways may be obtained from the operations of some services conducted by Railway and Tramway systems as adjuncts to their main services during the year 1926–27. Such services are conducted in Victoria by the Victorian Railways Commissioners and by the Melbourne and Metropolitan Tramways Board, and in South Australia by the South Australian Railways Commissioners

and by the Municipal Tramway Trust, Adelaide, the number of passengers carried by these services during the year 1926–27 being 198,362, 5,374,484, 2,618,180 and 5,343,711 respectively.

The services operated by the Melbourne and Metropolitan Tramways Board were necessary to provide transport facilities during the conversion of certain cable tram lines to electrical traction, but it is not the intention of the Board to institute omnibus services in a general way. In other instances the omnibus service has been provided to meet the competition of private enterprise and to endeavour to protect the existing transport utilities provided by public bodies.

5. Motor Vehicles Registered, etc.—(i) *Year 1926–27.* Particulars of the registration of motor vehicles, etc., for the year 1926–27 are contained in the subjoined table :—

MOTOR VEHICLES.—SUMMARY, 1926-27.

States and Territories.	Motor Vehicles Registered.				Drivers' and Riders' Licences Issued.	Revenue derived from—		
	Motor Cars.	Motor Cycles.	Commercial Vehicles.	Total.		Vehicle Registrations and Motor Tax.	Drivers' and Riders' Licences.	Total.
	No.	No.	No.	No.	No.	£	£	£
New South Wales ..	119,164	27,092	30,016	176,272	244,937	1,103,538	114,053	1,217,591
Victoria	110,950	23,011	*a*174	134,135	164,380	782,398	41,095	823,493
Queensland	*c*58,385	7,941	*b*2,492	68,818	52,066	253,806	17,873	271,679
South Australia ..	48,054	12,962	9,795	70,811	88,695	268,642	20.156	288,798
Western Australia ..	18,711	5,583	6,930	31,224	41,864	162,086	10,466	172,552
Tasmania	8,356	3,516	1,230	13,102	15,306	61,484	4,628	66,112
Northern Territory ..	133	27	80	240	295	125	69	194
Federal Capital Teritory	631	110	197	938	1,042	4,427	517	4,944
Australia ..	364,384	80,242	*d*50,914	495,540	608,585	2,636,506	208,857	2,845,363

(*a*) Motor buses. Trucks, vans, etc., included with motor cars. (*b*) Solid tyred vehicles.
(*c*) Pneumatic tyred vehicles. (*d*) Incomplete.

The number of all motor vehicles per 1,000 of population shows that Federal Capital Territory with 124.09 had the greatest density, followed in order of importance by South Australia (124.03), Western Australia (81.09), Victoria (77.69), Queensland (76.94), New South Wales (74.36), Tasmania (62.94), and Northern Territory least with 56.34 ; the figure for the Commonwealth being 80.35.

(ii) *Quinquennium 1923–1927.* The following table shows the number of vehicles registered, licences issued, and revenue received therefrom during each of the years 1922–23 to 1926–27 :—

MOTOR VEHICLES.—REGISTRATIONS, ETC., 1922-23 TO 1926-27.

Year.	Motor Vehicles Registered.				Drivers' and Riders' Licences Issued.	Revenue derived from—		
	Motor Cars.	Motor Cycles.	Commercial Vehicles. (*a*)	Total.		Vehicle Registration and Motor Tax.	Drivers' and Riders' Licences.	Total.
						£	£	£
1922–23	116,658	42,649	13,438	172,745	208,376	575,198	44,249	619,447
1923–24	168,568	52,717	18,056	239,341	296,177	801,701	62,001	863,702
1924–25	221,441	58,079	26,116	305,636	310,150	1,326,672	88,508	1,415,180
1925–26	282,199	70,209	37,892	390,300	496,311	2,098,112	137,639	2,235,751
1926–27	364,384	80,242	50,914	495,540	608,585	2,636,506	208,857	2,845,363

(*a*) Incomplete, partly included with Motor Cars.

During the period dealt with the number of motor vehicles showed an average annual increase of almost 28 % ; the greatest increase (38 %) being recorded during 1923–24. The number of vehicles per 1,000 of population increased from 30.37 to 80.35.

6. Comparative Motor Vehicle Statistics, 1928.—The result of the 1928 World Motor Census, conducted by the "American Automobile" magazine, from which the following particulars have been extracted, shows that there were approximately 29,600,000 motor cars, trucks, and buses registered in the various countries of the world at 1st January, 1928.

COMPARATIVE MOTOR VEHICLE STATISTICS, 1st JANUARY, 1928.

Country.	Motor Cars, Trucks, and Buses.	Motor Cycles.
Australia	464,225	85,000
Argentine	241,356	2,210
Belgium	100,000	32,000
Brazil	140,102	(*a*)
Canada	939,479	7,596
Cuba	45,000	300
Denmark	83,094	22,000
France	960,000	153,000
Germany	422,300	384,600
Great Britain	1,219,477	660,928
India	117,000	24,000
Irish Free State	44,304	10,920
Italy	165,000	(*a*)
Japan	49,556	10,000
Mexico	50,000	(*a*)
Netherlands	74,000	29,700
Netherlands East Indies	44,394	7,734
New Zealand	134,215	35,111
Union of South Africa	100,750	32,000
Spain	110,000	(*a*)
Sweden	110,500	32,500
Switzerland	53,000	30,000
United States of America	23,253,882	119,668

(*a*) Not available.

The foregoing figures are in some cases approximately stated, being based on estimates furnished by Trade Commissioners or representative motor trade organizations in the several countries. The figures for Australia are estimated at 31st December, 1927, and differ from those stated in para. 5, which are actual registrations at 30th June, 1927.

In respect of motor cars Australia now ranks fifth in importance numerically among the countries of the world, having displaced Germany from that position during 1925.

F. POSTS, TELEGRAPHS AND TELEPHONES.

§ 1. Posts.

1. The Commonwealth Postal Department.—In previous issues of the Year Book some account was given of the procedure in connexion with the transfer to the Federal Government of the postal, telegraphic, and telephonic facilities of the separate States. (See Year Book No. 15, p. 601.)

Under the provisions of the Commonwealth Post and Telegraph Act, 1901, the Commonwealth Postal Department was placed under the control of a Postmaster-General, being a responsible Minister with Cabinet rank, and a Secretary having chief control of the Department under the Postmaster-General, whilst a principal officer in each State was provided for under the style of Deputy Postmaster-General.

2. Postal Matter Dealt With.—(i) *Australia.* The following table gives a summary of the postal matter dealt with in Australia during the five years 1923 to 1927. Although mail matter posted in Australia for delivery therein is necessarily handled at least twice, only the numbers dispatched are included in the table following, which consequently gives the number of distinct articles handled.

POSTAL MATTER DEALT WITH.—AUSTRALIA, 1922-23 TO 1926-27.

Year ended 30th June—	Letters and Post-cards.		Newspapers.		Packets.		Parcels.		Registered Articles.	
	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.
	POSTED WITHIN AUSTRALIA FOR DELIVERY THEREIN.									
1923 ..	535,596	94,161	136,137	23,934	73,267	12,881	9,158	1,610	5,766	1,014
1924 ..	579,679	99,883	143,429	24,714	93,575	16,124	9,387	1,617	5,959	1,027
1925 ..	616,804	114,027	151,484	25,548	106,089	17,892	10,615	1,790	6,147	1,037
1926 ..	649,697	108,426	154,169	25,729	118,106	19,710	11,413	1,905	6,302	1,052
1927 ..	695,902	113,886	161,140	26,371	121,536	19,890	12,166	1,991	7,315	1,197
	OVERSEA RECEIVED.									
1923 ..	32,961	5,795	10,274	1,806	2,891	508	437	77	453	79
1924 ..	34,708	5,980	13,662	2,354	4,273	736	447	77	475	82
1925 ..	40,911	6,900	14,824	2,500	5,262	887	446	75	475	80
1926 ..	42,708	7,127	16,135	2,693	6,333	1,057	454	76	518	86
1927 ..	49,958	8,176	17,731	2,902	7,586	1,241	508	83	566	93
	OVERSEA DISPATCHED.									
1923 ..	25,722	4,522	4,734	832	1,671	294	183	32	303	53
1924 ..	29,016	5,000	5,681	979	2,283	393	190	33	341	59
1925 ..	34,328	5,790	6,839	1,153	2,617	441	169	28	388	65
1926 ..	42,440	7,083	8,290	1,383	2,964	495	212	35	415	69
1927 ..	50,285	8,229	9,844	1,611	3,607	590	229	37	466	76
	TOTAL POSTAL MATTER DEALT WITH BY THE COMMONWEALTH POSTAL DEPARTMENT.									
1923 ..	594,279	104,478	151,145	26,572	77,829	13,683	9,778	1,719	6,522	1,146
1924 ..	643,403	110,863	162,772	28,047	100,131	17,253	10,024	1,727	6,775	1,168
1925 ..	692,043	126,717	173,147	29,201	113,968	19,220	11,230	1,893	7,010	1,182
1926 ..	734,845	122,636	178,594	29,805	127,403	21,262	12,079	2,016	7,235	1,207
1927 ..	796,145	130,291	188,715	30,884	132,729	21,721	12,903	2,111	8,347	1,366

(ii) *States.* The next table shows separately for each State the postal matter dealt with in 1926–27 under the classification adopted in the preceding paragraph, with the exception of registered articles, which are dealt with separately hereinafter. The returns given for South Australia in this and all succeeding tables include those for the Northern Territory, while the returns for the Federal Capital Territory are included in those for New South Wales.

POSTAL MATTER DEALT WITH.—STATES, 1926-27.

State.	Letters and Post-cards.		Newspapers.		Packets.		Parcels.	
	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.
POSTED FOR DELIVERY WITHIN AUSTRALIA.								
New South Wales	297,755	126,559	70,147	29,815	54,378	23,113	5,608	2,384
Victoria ..	197,550	115,403	38,914	22,733	17,678	10,327	2,416	1,411
Queensland ..	75,236	85,283	28,533	32,343	20,814	23,594	2,300	2,607
South Australia	54,400	95,390	9,100	15,957	16,133	28,289	983	1,724
Western Australia	37,459	98,903	7,498	19,796	7,404	19,548	680	1,794
Tasmania ..	33,502	156,003	6,948	32,352	5,129	23,882	179	836
Australia ..	695,902	113,886	161,140	26,371	121,536	19,890	12,166	1,991
OVERSEA RECEIVED.								
New South Wales	20,039	8,517	6,155	2,616	3,298	1,402	203	86
Victoria ..	19,755	11,540	4,871	2,845	1,141	667	161	94
Queensland ..	3,032	3,437	3,232	3,664	1,011	1,146	47	53
South Australia	3,278	5,749	936	1,641	576	1,009	42	73
Western Australia	3,013	7,955	1,911	5,045	1,051	2,774	44	117
Tasmania ..	841	3,915	626	2,917	509	2,369	11	54
Australia ..	49,958	8,176	17,731	2,902	7,586	1,241	508	83
OVERSEA DISPATCHED.								
New South Wales	31,193	13,258	5,094	2,165	2,535	1,077	143	61
Victoria ..	9,681	5,655	3,044	1,778	489	286	51	30
Queensland ..	2,627	2,978	714	809	171	194	13	15
South Australia	2,515	4,411	318	558	138	243	10	17
Western Australia	2,482	6,552	390	1,031	67	178	10	27
Tasmania ..	1,787	8,320	284	1,322	207	963	2	8
Australia ..	50,285	8,229	9,844	1,611	3,607	590	229	37

3. Postal Facilities.—(i) *Relation to Area and Population.* The subjoined statement shows the number of post and receiving offices, the area in square miles and the number of inhabitants to each post office (including receiving offices) in each State and in Australia at the end of the year 1926–27. In order to judge clearly the relative postal facilities provided in each State, the area of country to each office, as well as the number of inhabitants per office, should be taken into account.

POSTAL FACILITIES.—RELATION TO AREA AND POPULATION, at 30th JUNE, 1927.

State.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Australia.
Number of post and receiving offices	2,682	2,729	1,285	807	715	521	8,739
Number of square miles of territory to each office in State	116	32	522	1,120	1,365	50	340
Number of inhabitants to each office	887	633	696	713	539	400	706
Number of inhabitants per 100 square miles	766	1,964	133	64	39	794	207

The foregoing table does not include "telephone" offices at which telegraph and telephone business only is transacted.

(ii) *Number of Offices.* The following table shows the number of post and receiving offices in each year from 1922–23 to 1926–27 inclusive :—

POST AND RECEIVING OFFICES AT 30th JUNE, 1923 TO 1927.

State.	At 30th June—									
	1923.		1924.		1925.		1926.		1927.	
	Post Offices.	Receiving Offices.	Post Offices.	Receiving Offices.	Post Offices.	Receiving Offices.	Post Offices.	Receiving Offices.	Post Offices.	Receiving Offices.
New South Wales ..	2,040	559	2,059	584	2,063	601	2,086	593	2,091	591
Victoria	1,736	859	1,774	898	1,785	923	1,792	922	1,821	908
Queensland ..	678	567	694	565	743	544	756	528	766	519
South Australia ..	667	137	669	136	675	132	676	132	671	136
Western Australia ..	426	306	445	401	465	255	472	260	466	249
Tasmania ..	413	106	428	114	411	103	414	109	421	100
Australia ..	5,960	2,534	6,069	2,698	6,142	2,558	6,196	2,544	6,236	2,503

(iii) *Employees and Mail Contractors.*—The number of employees and mail contractors in the Central Office and in each of the States is given in the appended table :—

POSTAL EMPLOYEES AND MAIL CONTRACTORS, 1923 TO 1927.

State.	At 30th June—									
	1923.		1924.		1925.		1926.		1927.	
	Employees.	Mail Contractors.	Employees.	Mail Contractors.	Employees.	Mail Contractors.	Employees.	Mail Contractors.	Employees.	Mail Contractors.
Central Office ..	95	..	100	..	110	..	130	..	149	..
New South Wales ..	13,255	1,732	13,947	1,791	14,413	1,915	14,244	1,924	14,214	1,933
Victoria	9,148	1,124	10,279	1,133	11,140	1,139	11,226	1,156	11,607	1,145
Queensland ..	4,978	810	6,220	819	6,322	839	6,181	850	5,953	860
South Australia ..	3,227	422	4,014	354	3,926	430	4,275	424	4,388	402
Western Australia ..	2,450	339	2,450	382	3,271	319	2,986	379	3,061	357
Tasmania ..	1,321	202	1,582	206	1,551	243	1,615	247	1,555	247
Australia ..	34,474	4,629	38,592	4,685	40,733	4,885	40,657	4,980	40,927	4,944

4. Registered Letters, Packets, etc.—Particulars regarding registered articles for the year 1926–27 are given in the table hereunder :—

REGISTERED ARTICLES POSTED AND RECEIVED, 1926-27.

State.	Posted in each State for Delivery within Australia.		Posted in each State for Delivery Overseas.		Total Posted.		Received in each State from Overseas.	
	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.	Number (,000 omitted).	Per 1,000 of Population.
New South Wales ..	2,614	1,111	196	83	2,810	1,194	242	103
Victoria	2,362	1,380	119	69	2,481	1,449	176	103
Queensland ..	973	1,003	53	59	1,026	1,162	48	55
South Australia ..	573	1,005	34	60	607	1,065	34	60
Western Australia ..	515	1,360	59	155	574	1,515	55	145
Tasmania ..	278	1,293	5	25	283	1,318	11	51
Australia ..	7,315	1,197	466	76	7,781	1,273	566	93

5. Value-Payable Parcel and Letter Post.—(i) *General.* The Postal Department undertakes to deliver registered articles sent by parcel post within Australia, or between Papua or Nauru and Australia, to recover from the addressee on delivery a specified sum of money fixed by the sender, and to remit the sum to the sender by money order, for which the usual commission is charged. The object of the system is to meet the requirements of persons who wish to pay at the time of receipt for articles sent to them, also to meet the requirements of traders and others who do not wish their goods to be delivered except on payment.

(ii) *Summary of Business.* The next statement gives particulars regarding the value-payable post in each State for the years 1923 to 1927 :—

VALUE-PAYABLE PARCELS POST.—SUMMARY, 1923 TO 1927.

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
NUMBER OF PARCELS POSTED.							
	No.	No.	No.	No.	No.	No.	No.
1923	134,703	5,329	207,162	1,604	56,572	113	405,483
1924	165,360	6,421	225,040	2,456	63,393	292	462,962
1925	209,265	8,397	199,752	3,559	69,065	387	490,425
1926	236,900	11,508	204,819	5,033	69,970	316	528,546
1927	252,300	11,801	216,418	8,132	71,473	446	560,570
VALUE COLLECTED.							
	£	£	£	£	£	£	£
1923	237,209	10,826	279,508	2,485	87,508	439	617,975
1924	277,087	11,310	364,965	3,406	101,515	715	758,998
1925	347,902	15,440	331,280	5,728	108,193	1,055	809,598
1926	397,283	22,035	328,954	6,327	109,671	811	865,081
1927	402,186	21,617	334,619	10,939	112,276	1,075	882,712

VALUE-PAYABLE PARCELS POST.—SUMMARY, 1923 TO 1927—*continued.*

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
REVENUE, INCLUDING POSTAGE, COMMISSION ON VALUE, REGISTRATION AND MONEY ORDER COMMISSION.							
	£	£	£	£	£	£	£
1923	18,586	667	29,602	248	7,365	52	56,520
1924	23,026	855	30,318	263	8,277	42	62,781
1925	31,324	1,138	25,908	469	8,951	53	67,843
1926	32,232	1,564	26,539	634	8,872	44	69,885
1927	32,450	1,569	28,108	864	8,720	58	71,769

The number and value of parcels forwarded in New South Wales and Queensland are greatly in excess of the transactions of any of the other States, although the system has also found favour for several years in Western Australia. These three States have the largest areas, and consequently more people at long distances from business centres who avail themselves of the value-payable system. Although South Australia, too, has a large area the population of that State is, comparatively, not widely spread. The amount of business transacted in Victoria, South Australia, and Tasmania is comparatively light, but generally increased business has been done in recent years.

6. Sea-borne Mail Services.—(i) *Summary.* In earlier issues of this work statements regarding the development of the principal sea-borne mail services were included, but owing to the restrictions of space this information cannot be repeated. The following tabular summary, however, contains information in respect of sea-borne mail services as at 1st April, 1928 :—

SUMMARY OF AUSTRALIAN SEA-BORNE MAIL SERVICES, 1928.

Description of Service.	Frequency of Service.	Ports between which Service is maintained.	Particulars regarding Subsidies.
1. *To and from Ports in New South Wales*—			
(i) N.S. WALES—Q'LAND	Weekly	Sydney and Brisbane ..	Poundage rates
(ii) NORTHERN PORTS— (*a*) North Coast S.N. Co.	Once weekly	Sydney and Clarence River, Byron Bay, and Richmond River	" "
(*b*) " "	Fortnightly	Sydney and South Solitary Island	" "
(iii) SOUTH COAST PORTS— Illawarra and S. Coast S.N. Co.	Fortnightly	Sydney, Montague Island	" "
2. *To and from Northern Ports of Queensland*—			
(*a*) Hayles Magnetic Island Limited	Weekly	From Cairns to Cooktown via Port Douglas	Subsidized from 1st January, 1928, for three years. Amount of subsidy, £2,200 per annum.
(*b*) Other steamers	Irregularly	Various	Poundage rates

SUMMARY OF AUSTRALIAN SEA-BORNE MAIL SERVICES—*continued.*

Description of Service.	Frequency of Service.	Ports between which Service is maintained.	Particulars regarding Subsidies.
3. *To and from Ports in South Australia—*			
(*a*) Coast Steamship Co. Ltd.	Weekly	Port Adelaide and Kingscote	Subsidized to 31st December, 1928. Amount of subsidy, £1,000
(*b*) Adelaide Steamship Co. ..	Twice weekly	Port Adelaide and Port Lincoln	Subsidized for three years from 1st January, 1926. Amount of subsidy, £3,000
(*c*) ,, ,, ,, ..	Weekly	Port Adelaide and Port Lincoln	Poundage rates
(*d*) ,, ,, ,, ..	,,	Port Adelaide and Arno Bay	,, ,,
(*e*) ,, ,, ,, ..	,,	Wallaroo and Cowell ..	,, ,,
(*f*) Coast Steamships Ltd. ..	Fortnightly	Port Adelaide to Streaky Bay	,, ,,
(*g*) ,, ,, ,, ..	Weekly (Thursdays)	Port Adelaide to Kingscote	,, ,,
(*h*) McIlwraith, McEacharn Line	Monthly	Port Adelaide to Albany	,, ,,
4. *Western Australia—*			
TO AND FROM PORTS ON N.W. COAST—			
(*a*) State Shipping Service	Monthly	Fremantle and Derby..	Subsidized by agreement dated 28th February, 1913, for three years. Later extended to a date three months after expiration of war. Subsequently extended for indefinite period. Amount of subsidy, £5,500
(*b*) ,, ,, ,,	Once each sixty days	Fremantle and Darwin	
(*c*) West Australian S.N. Co.	About fortnightly	Fremantle and Singapore, via N.W. Ports	Poundage rates
(*d*) State Shipping Service	Irregularly, during the cattle season	Fremantle, Derby, Wyndham, Java and Singapore	,, ,,
5. *Tasmania—*			
(*a*) Tasmanian Steamers Pty Ltd.	Three times a week summer; twice a week winter	Melbourne and Launceston	Subsidy, £30,000 per annum from 1st May, 1921, under contract for twelve months, and thereafter terminable on twelve months' notice by either party to the agreement
(*b*) ,, ,, ,,	Twice a week	Melbourne and Burnie	
(*c*) Union S.S. Co. and Huddart Parker Ltd.	Weekly	Sydney and Hobart ..	Poundage rates
(*d*) Union Steamship Co. ..	,,	Sydney, Launceston, and Devonport	,, ,,
(*e*) Holyman and Sons Pty. Ltd.	,,	Melbourne—Launceston	,, ,,
(*f*) ,, ,, ,,	,,	Melbourne, Launceston*	,, ,,
(*g*) ,, ,, ,,	,,	Melbourne, Burnie, etc.	,, ,,
(*h*) Huon Channel and Peninsula Co.	Thrice a week	Hobart and Kelly's Point, via Pearson's Point	Subsidized by agreement dated 1st January, 1928, for three years. Amount of subsidy, £63 per annum
(*i*) ,, ,, ,,	Four times a week	Hobart and Alonnah ..	Subsidized by agreement dated 1st January, 1928, for three years. Amount of subsidy, £75 per annum
(*j*) The Commissioner, Tasmanian Government Railways	Every two weeks	Launceston and Furneaux Group of islands	Subsidized by agreement dated 1st January, 1928, for three years. Amount of subsidy, £375 per annum
(*k*) ,, ,, ,,	Fortnightly	Launceston and Currie, King Island	Subsidized by agreement dated 1st January, 1928, for three years. Amount of subsidy, £400 per annum
(*l*) Holyman and Sons Pty. Ltd.	Weekly	Burnie and Melbourne, via Fraser River, King Island	Poundage rates

* Not operative during winter months, as under that time-table the contract vessel leaves on the same day during this period.

SUMMARY OF AUSTRALIAN SEA-BORNE MAIL SERVICES—*continued.*

Description of Service.	Frequency of Service.	Ports between which Service is maintained.	Particulars regarding Subsidies.
6. *To and from Northern Territory—*			
(*a*) Burns, Philp and Co. ..	Monthly	To and from Melbourne and Sydney, via Queensland ports	Poundage rates
(*b*) State Steamship Service of Western Australia	Once each sixty days	Fremantle and Darwin ..	See Item 4 (*b*)
7. *To and from New Zealand—*			
(*a*) Conjointly by Union S.S. Co. and Huddart, Parker Ltd.	Weekly	Sydney and Wellington; Sydney and Auckland	Poundage rates
(*b*) Other steamers ..	Irregularly, when convenient	Sydney, Wellington, Auckland, Lyttelton, and other Ports	,, ..
(*c*) Canadian-Australasian and Union Line	Fortnightly	Sydney, Auckland, and Wellington	.. ..
(*d*) Other steamers ..	About every three weeks	Melbourne and Wellington, or Bluff	,, ..
8. *Pacific Islands—*			
(*a*) Burns, Philp and Co. ..	Every five weeks	Sydney to Lord Howe and Norfolk Islands and New Hebrides	Subsidized by Commonwealth Government
(*b*) ,, ,, ..	Irregularly	Sydney to Nauru and Ocean Islands, Gilbert and Ellice Groups	,, ,,
(*c*) ,, ,, ..	Monthly	Sydney to Papua, via Brisbane	,, ..
(*d*) ,, ,, ..	Every three weeks	Sydney to Rabaul, via Brisbane	.. ..
(*e*) ,, ,, ..	Every five weeks	Sydney to Solomon Islands, via Brisbane	.. ..
(*f*) ,, ,, ..	,,	Sydney and Santa Cruz, via Brisbane and Tulagi	. ..
9. *New Caledonia and New Hebrides—*			
(*a*) Messageries Maritimes ..	Monthly	Sydney and Noumea and to Vila (New Hebrides)	Postal Union rates
(*b*) Other steamers ..	About twice a month	Sydney and Noumea ..	Poundage rates
10. *Fiji, Friendly Islands, and Samoa—*			
(*a*) Union S.S. Co. ..	Every four weeks	Sydney and Suva ..	,, ,,
(*b*) ,, ,, ..	,,	Sydney, Suva, Tonga, and Samoa	,, ,,
(*c*) A.U.S.N. Co.	,,	Sydney and Suva ..	,, ,,
(*d*) Oceanic S.S. Co. ..	Every three weeks	Sydney, Suva, and Samoa	,, ..
11. *To Eastern Ports—*			
(*a*) Burns, Philp and Co. ..	Monthly	Melbourne and Sydney to Java and Singapore, via Queensland Ports and Darwin	Subsidized by Commonwealth Govt.. Mails at poundage rates
(*b*) Aust.-Oriental Line ..	About once a month	Melbourne and Sydney to Hong Kong, Manila, China, via Queensland Ports.	Poundage rates
(*c*) Eastern and Aus'n. Line	Monthly	Sydney to Manila, China, Japan, via Brisbane	,, ,,
(*d*) Nippon Yusen Kaisha ..	Every four weeks	Melbourne and Sydney to Manila, China, and Japan, via Queensland Ports	Postal Union rates
(*e*) Osaka Shosen Kaisha ..	Monthly	Melbourne and Sydney to Japan, via Brisbane	Poundage rates
(*f*) Japan-Australia Line ..	,,	Melbourne and Sydney to Japan via Brisbane	.. ..
(*g*) Royal Dutch Packet S.N. Co.	,,	Melbourne to Java and Singapore, via Sydney and Queensland Ports	.. ..
(*h*) Various other steamers	About monthly	Sydney or Newcastle and ports in Borneo, Java, Sumatra, Japan, and Malay Peninsula	,, ,,
(*i*) Western Australian S.N. Co.	About fortnightly	W.A. Ports, Java, and Singapore	,, ,,
(*j*) Austral East Indies Line of steamers	Monthly	Sydney, Melbourne, Adelaide, Fremantle, Java, and Singapore	,, ,,

SUMMARY OF AUSTRALIAN SEA-BORNE MAIL SERVICES—*continued.*

Description of Service.	Frequency of Service.	Ports between which Service is maintained.	Particulars regarding Subsidies.
12. *South Africa*— Blue Funnel, White Star, P. and O. Branch Service, and other Companies	Irregularly	Sydney, Melbourne, Adelaide, and Fremantle to Durban and Capetown	Poundage rates
13. *To and from Europe, via Suez*—			
(a) Orient Steam Navigation Co.	Every four weeks	Brisbane, Sydney, Melbourne, Adelaide, Fremantle, and London, via Suez	Subsidy, £130,000. Commenced 20th September, 1921. Terminable on twelve months' notice by either party
(b) Peninsular and Oriental S.N. Co. Ltd.	Fortnightly	Sydney, Melbourne, Adelaide, Fremantle, and London, via Suez	Postal Union rates
(c) Commonwealth Government Line of Steamers	About every four weeks	,, ,, ,,	Poundage rates
14. *To and from Europe, via Vancouver*—			
(a) Canadian-Aust. Line	Irregularly	Sydney and Vancouver, B.C., via Auckland, Fiji, Honolulu	,, ,,
15. *To and from Europe, via San Francisco*—			
(a) Union Steamship Company	,,	Sydney, Wellington, Raratonga, Tahiti, and San Francisco	Subsidized by New Zealand Govt.. Mails from Aust. at Postal Union rates
(b) Oceanic Steamship Co...	,,	Sydney, Suva, Pago Pago (Samoa), Honolulu, and San Francisco	Poundage rates
16. *North America*—			
(a) Union S.S. Co.	Every four weeks	Sydney, Wellington, Tahiti, and San Francisco	,, ,,
(b) Canadian-Aust. Line ..	,,	Sydney, Auckland, Fiji, Honolulu, and Vancouver	,, ,,
(c) Oceanic S.S. Co. ..	Every three weeks	Sydney, Suva, Pago Pago (Samoa), Honolulu, and San Francisco	,, ,,
17. *South America*—			
(a) Oceanic S.S. Co. Union S.S. Co.	Thrice a month	Sydney, via San Francisco to ports in Chile, Brazil, Peru, Uruguay, and Argentine	,, ,,
(b) Various other steamers	Irregularly	Via Newcastle and Sydney to various ports	,, ,,

(ii) *Average and Fastest Time of Mails to and from London.* (a) *Via Suez Canal.*

The subjoined table shows the average and the fastest times occupied in the conveyance of mails from London to Fremantle and vice versa during the year 1927–28:—

AVERAGE AND FASTEST TIME.—MAILS VIA SUEZ CANAL, LONDON TO FREMANTLE, AND VICE VERSA DURING 1927-28.

Period.	London to Fremantle.				Fremantle to London.			
	Average Time.		Fastest Time.		Average Time.		Fastest Time.	
	Days.	Hours.	Days.	Hours.	Days.	Hours.	Days.	Hours.
3.3.27 to 5.3.28	25	12¾	24	18½	26	5½	25	12½

(*b*) *Via America.* The average and fastest times occupied in the conveyance of mails between London and Sydney via America during 1927 were :—

AVERAGE AND FASTEST TIME.—MAILS, VIA AMERICA, DURING 1927.

Service.		Average Time.		Fastest Time.	
		Days.	Hours.	Days.	Hours.
London to Sydney	via Vancouver	(*a*)		(*a*)	
	via San Francisco	33	—	33	—
Sydney to London	via Vancouver	35	20	34	—
	via San Francisco	33	12	31	—

(*a*) No mails received from London in 1927 via Vancouver.

(iii) *Amount of Mail Subsidies Paid.* The following table shows the amounts of subsidies paid by the Commonwealth Postal Department for ocean and coastal mail services during the year ended 30th June, 1927 :—

MAIL SUBSIDIES.—OCEAN AND COASTAL SERVICES, 1926-27.

Service.	Orient S.N. Co.	Queensland Ports.	South Australian Ports.	Western Australian Ports.	Tasmanian Ports.
	£	£	£	£	£
Annual subsidy	129,195	3,203	4,120	7,458	29,863

During the year 1926–27 the amount paid for conveyance of mails at poundage rates by non-contract vessels was £38,415 ; by road services, £679,076 ; and by railways services, £484,397. The total expenditure during the financial year 1926–27 on the carriage of mails, as disclosed by the Profit and Loss Account, amounted to £1,363,259.

7. Transactions of the Dead Letter Offices.—The table hereunder shows the number of letters, postcards and letter-cards, and packets and circulars, including Inland, Interstate, and International, dealt with by the Dead Letter Offices in 1926–27, and the methods adopted in the disposal thereof :—

DEAD LETTER OFFICES.—SUMMARY, 1926-27.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
LETTERS, POSTCARDS, AND LETTERCARDS.							
Returned direct to writers or delivered	992,030	375,937	300,697	139,873	136,790	75,718	2,021,045
Destroyed in accordance with Act..	91,625	77,098	50,939	30,860	12,105	8,496	271,123
Returned to other States or Countries as unclaimed	63,996	34,470	21,425	11,009	17,277	1,652	149,829
Total	1,147,651	487,505	373,061	181,742	166,172	85,866	2,441,997
PACKETS AND CIRCULARS.							
Returned direct to writers or delivered	902,308	155,610	248,025	79,151	92,626	29,898	1,507,618
Destroyed in accordance with Act ..	182,199	106,687	53,982	130,049	1,557	558	475,032
Returned to other States or Countries as unclaimed	3,423	26,378	10,084	4,274	696	3,804	48,659
Total	1,087,930	288,675	312,091	213,474	94,879	34,260	2,031,309
Grand Total (letters, packets, etc.)	2,235,581	776,180	685,152	395,216	261,051	120,126	4,478,306

During the year 1926–27 money and valuables to the amount of £163,566 were found in undeliverable postal articles, while 38,178 postal articles were posted without address, including 379 which contained money and valuables to the extent of £3,766.

8. **Money Orders and Postal Notes.**—(i) *General.* The issue of money orders and postal notes is regulated by sections 74 to 79 of the Post and Telegraph Act, 1901. A money order may be issued for payment of sums up to £20 within Australia, and not exceeding £40 (in some cases £20, and in Mauritius £10) in places abroad. A postal note which is payable only within Australia and in Papua, cannot be issued for a larger sum than twenty shillings.

(ii) *Summary for States, 1926–27.* Particulars regarding the business transacted in each State for the year 1926–27 are given hereunder :—

MONEY ORDERS AND POSTAL NOTES.—SUMMARY, 1926-27.

State.	Value of Money Orders Issued.	Value of Money Orders Paid.	Net Money Order Commission Received.	Value of Postal Notes Sold.	Poundage Received on Postal Notes.
	£	£	£	£	£
New South Wales ..	7,532,605	7,418,068	49,492	2,269,252	50,776
Victoria	3,291,763	3,406,552	22,661	1,665,216	37,669
Queensland ..	2,602,834	2,316,236	17,612	548,733	12,256
South Australia ..	1,107,717	988,528	7,737	376,659	8,683
Western Australia ..	1,390,295	1,239,301	9,448	300,234	6,365
Tasmania	574,663	556,701	3,896	140,271	3,295
Australia ..	16,499,877	15,925,386	110,846	5,300,365	119,044

The figures in the foregoing table show a substantial increase over the corresponding particulars for the previous year.

(iii) *Summary, Australia, 1923 to 1927.* The next table shows the total number and value of money orders and postal notes issued and paid in Australia from 1922–23 to 1926–27 :—

MONEY ORDERS AND POSTAL NOTES.—SUMMARY, AUSTRALIA, 1922-23 TO 1926-27.

Year ended 30th June—	Money Orders.				Postal Notes.			
	Issued.		Paid.		Issued.		Paid.	
	Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.
	No. (,000).	£ (,000).	No. (,000).	£ (,000).	No. (,000).	£ (,000).	No. (,000).	£ (,000).
1923 ..	2,873	14,121	2,724	13,706	12,512	4,160	12,455	4,148
1924 ..	2,832	14,377	2,686	13,913	13,382	4,350	13,240	4,311
1925 ..	2,976	15,155	2,835	14,728	13,437	4,634	13,370	4,616
1926 ..	3,081	15,845	2,911	15,366	14,237	4,946	14,044	4,862
1927 ..	3,225	16,500	3,043	15,925	14,502	5,300	14,360	5,270

(iv) *Classification of Money Orders Issued and Paid.* (*a*) *Orders Issued.* The next table shows the number and value of money orders issued in each State during the year 1926–27, classified according to the country where payable :—

MONEY ORDERS ISSUED.—COUNTRY WHERE PAYABLE, 1926-27.

State in which Issued.	Where Payable.				Total.
	In Australia.	In New Zealand.	In Great Britain and Ireland.	In Other Countries.	
			NUMBER.		
New South Wales ..	1,348,785	14,123	96,103	21,716	1,480,727
Victoria	565,983	7,221	59,050	16,458	648,712
Queensland.. ..	445,058	2,071	28,467	11,734	487,330
South Australia ..	191,463	1,223	20,651	8,424	221,761
Western Australia ..	230,708	984	22,015	5,280	258,987
Tasmania	118,752	1,354	5,568	1,396	127,070
Australia ..	2,900,749	26,976	231,854	65,008	3,224,587
			VALUE.		
	£	£	£	£	£
New South Wales ..	7,094,265	56,693	286,775	94,872	7,532,605
Victoria	3,010,044	30,380	171,248	80,091	3,291,763
Queensland.. ..	2,447,540	8,914	87,298	59,082	2,602,834
South Australia ..	997,201	4,937	60,047	45,532	1,107,717
Western Australia ..	1,292,697	4,748	70,082	22,768	1,390,295
Tasmania	554,137	5,584	11,940	3,002	574,663
Australia ..	15,395,884	111,256	687,390	305,347	16,499,877

(*b*) *Orders Paid.* The number and value of money orders paid in each State during the year 1926–27, classified according to the country where issued, are given hereunder :—

MONEY ORDERS PAID.—COUNTRY OF ISSUE, 1926-27.

State in which Paid.	Where Issued.				Total.
	In Australia.	In New Zealand.	In Great Britain and Ireland.	In Other Countries.	
			NUMBER.		
New South Wales ..	1,354,751	37,309	18,418	13,567	1,424,045
Victoria	620,116	18,657	11,051	5,525	655,349
Queensland.. ..	411,295	2,469	5,603	3,358	422,725
South Australia ..	188,963	1,199	3,118	1,167	194,447
Western Australia ..	220,118	1,565	5,279	1,466	228,428
Tasmania	111,561	2,933	1,357	2,085	117,936
Australia ..	2,906,804	64,132	44,826	27,168	3,042,930
			VALUE.		
	£	£	£	£	£
New South Wales ..	7,143,621	135,917	85,034	53,496	7,418,068
Victoria	3,275,636	58,332	50,066	22,518	3,406,552
Queensland.. ..	2,271,160	9,596	23,774	11,706	2,316,236
South Australia ..	964,051	4,669	13,912	5,896	988,528
Western Australia ..	1,202,477	5,177	25,727	5,920	1,239,301
Tasmania	539,002	8,433	4,610	4,656	556,701
Australia ..	15,395,947	222,124	203,123	104,192	15,925,386

In the tables above, money orders payable or issued in foreign countries which have been sent from or to Australia through the General Post Office at London are included in those payable or issued in Great Britain and Ireland.

(v) *Classification of Postal Notes Paid.* The subjoined table shows the number and value of postal notes paid during the year 1926–27, classified according to the State in which they were issued.

Particulars regarding the total number and value of postal notes issued and paid in each of the last five years have been given previously.

POSTAL NOTES PAID.—STATE OF ISSUE, 1926-27.

Particulars.	Postal Notes Paid in—						
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
			NUMBER.				
Issued in same State	4,111,734	2,904,339	1,205,730	674,766	658,560	314,288	9,869,417
Issued in other States	503,432	393,681	1,007,230	65,396	29,669	2,491,563	4,490,971
Total ..	4,615,166	3,298,020	2,212,960	740,162	688,229	2,805,851	14,360,388
			VALUE.				
	£	£	£	£	£	£	£
Issued in same State	1,617,272	1,089,324	439,921	231,361	249,278	104,679	3,731,835
Issued in other States	193,301	156,366	288,918	27,847	12,216	859,060	1,537,708
Total ..	1,810,573	1,245,690	728,839	259,208	261,494	963,739	5,269,543

The number and value of postal notes paid in Australia during the year showed an increase of 2 and 8 per cent. respectively over the corresponding figures for the year 1925–26.

9. **Profit or Loss, Postmaster-General's Department.**—(i) *Revenue (a) Analysis, States, 1926–27.* The following table shows the gross revenue classified according to Branches in each State for the year 1926–27. The figures are supplied by the Treasury, and represent the actual collections for the year.

GROSS REVENUE, POSTMASTER-GENERAL'S DEPT., ANALYSIS, 1926-27.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	£	£	£	£	£	£	£
Postage	1,946,665	1,383,227	680,685	403,424	286,509	146,807	4,847,317
Money order commission ..	100,147	59,646	29,955	16,464	16,024	7,217	229,453
Poundage on postal notes							
Private boxes and bags	20,051	12,376	12,333	7,942	4,208	2,274	59,184
Miscellaneous ..	125,353	96,383	60,355	33,419	43,744	10,777	370,031
Total Postal ..	2,192,216	1,551,632	783,328	461,249	350,485	167,075	5,505,985
Telegraphs (ordinary)	509,844	326,833	249,807	222,911	132,429	46,332	1,488,156
Telegraphs (radio)	9,073	19,063	3,806	3,049	596	228	35,815
Total Telegraphs	518,917	345,896	253,613	225,960	133,025	46,560	1,523,971
Telephones ..	1,753,635	1,310,880	622,129	513,031	256,708	120,480	4,576,863
Grand Total ..	4,464,768	3,208,408	1,659,070	1,200,240	740,218	334,115	11,606,819

Increased telephone revenue (£532,449) largely contributed to the total increase of £835,063 over the revenue for 1925–26.

(*b*) *Branches, 1923 to 1927.* The gross revenue collected in respect of each Branch of the Department during each of the past five years was as stated in the table hereunder :—

GROSS REVENUE, POSTMASTER-GENERAL'S DEPT., 1923 TO 1927.

Year ended 30th June—	Postal Branch.	Telegraph Branch.	Telephone Branch.	Total.
	£	£	£	£
1923	5,395,829	(*b*)1,413,375	2,983,069	9,792,273
1924	5,024,816	(*c*)1,430,554	3,301,651	9,757,021
1925	4,944,546	(*d*)1,500,076	3,599,864	10,044,486
1926	5,215,684	(*e*)1,511,658	4,044,414	10,771,756
1927	5,505,985	(*a*)1,523,971	4,576,863	11,606,819

Includes radio receipts (*a*) £35,815, (*b*) £7,711, (*c*) £4,012, (*d*) £18,292, and (*e*) £21,178.

As compared with the corresponding figures for the previous year, an increase of 7.75 per cent. is shown. The figures for each Branch increased by 5.57, 0.81, and 13.17 per cent. respectively.

(ii) *Working Expenses* (*a*) *Analysis, States, 1926–27.* Particulars of the working expenses of each Branch of the Department by States during 1926–27 are shown in the following table. As in the case of Gross Revenue, the figures have been furnished by the Treasury and represent actual payments during the financial year.

WORKING EXPENSES, POSTMASTER-GENERAL'S DEPARTMENT, 1926–27.

Branch.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmânia.	Australia.
	£	£	£	£	£	£	£
Postal ..	1,948,226	1,320,273	667,237	406,028	341,446	185,719	4,868,929
Telegraph ..	579,285	353,360	289,582	199,666	187,450	69,029	1,678,372
Telephone ..	1,437,290	1,012,961	590,284	444,825	239,528	139,319	3,864,207
All Branches	3,964,801	2,686,594	1,547,103	1,050,519	768,424	394,067	10,411,508

The working expenses of the Postal Branch represented 47 per cent. of the total, Telegraph Branch, 16 per cent., and the Telephone Branch, 37 per cent.

(*b*) *Branches, 1923 to 1927.* The appended table shows the working expenses of each Branch for the period 1922–23 to 1926–27.

WORKING EXPENSES, POSTMASTER-GENERAL'S DEPARTMENT, 1923 TO 1927.

Year ended 30th June—	Postal Branch.	Telegraph Branch.	Telephone Branch.	Total.
	£	£	£	£
1923	3,979,020	1,389,302	2,283,542	7,651,864
1924	4,278,917	1,546,021	2,623,839	8,448,777
1925	4,488,021	1,613,695	3,128,914	9,230,630
1926	4,637,126	1,704,705	3,487,234	9,829,065
1927	4,868,929	1,678,372	3,864,207	10,411,508

The working expenses for the Department as a whole have increased by £2,759,644 (36 per cent.) during the four years, the percentage increase in regard to each Branch being, Postal, 22 per cent. ; Telegraph, 21 per cent. ; and Telephone, 69 per cent.

(iii) *Interest Charges.*—(*a*) *States and Branches, 1926–27.* The interest payable on capital expenditure for the three Branches in each State during 1926–27 was as follows :—

INTEREST CHARGES, POSTMASTER-GENERAL'S DEPARTMENT, 1926–27.

Branch.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
	£	£	£	£	£	£	£
Postal ..	52,683	37,980	15,619	12,971	13,933	3,397	136,583
Telegraph ..	51,041	30,037	31,743	22,541	23,064	4,032	162,458
Telephone ..	404,634	303,606	175,254	130,352	69,531	28,400	1,111,777
All Branches	508,358	371,623	222,616	165,864	106,528	35,829	1,410,818

Owing to the great expansion of the Telephone service during recent years, and the more expensive nature of equipment generally, the interest charges allocated to the Telephone Branch represented almost 79 per cent. of the total.

(*b*) *Branches, 1923 to 1927.* For the five years, 1923 to 1927, each Branch was debited with the following amounts in respect of interest on capital expenditure :—

Year ended 30th June.	Postal. Branch.	Telegraph. Branch.	Telephone. Branch.	All Branches.
	£	£	£	£
1923	105,198	134,627	540,410	780,235
1924	116,534	157,029	638,109	911,672
1925	122,442	173,288	790,816	1,086,546
1926	129,084	187,714	942,391	1,259,189
1927	136,583	162,458	1,111,777	1,410,818

The interest payable is calculated at 3½ per cent. on the value of the assets, particulars of which are contained in para. 11.

(iv) *Profit or Loss.*—(*a*) *States, 1926–27.* The operations of each Branch of the Department in the several States after providing for Working Expenses, Depreciation, and Interest Charges during the year 1926–27, showed the following results :—

PROFIT OR LOSS, POSTMASTER-GENERAL'S DEPARTMENT, 1926–27.

Branch.	—	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
		£	£	£	£	£	£	£
Postal ..	Profit	195,390	178,867	91,134	31,029	..	..	445,929
	Loss	..	..	..	..	26,458	24,033	..
Telegraph ..	Profit	..	..	..	..	..	..	..
	Loss	89,886	39,260	60,999	5,521	62,484	20,570	278,720
Telephone ..	Profit	..	3,438	..	..	..	..	..
	Loss	70,313	..	125,656	53,310	46,380	47,049	339,270
All Branches	Profit	35,191	143,045	..	..	..	..	..
	Loss	..	..	95,521	27,802	135,322	91,652	172,061

After providing for depreciation, pensions and retiring allowances and interest on capital, the year 1926–27 closed with a loss of £172,061, which represents an improvement of £113,276 on the result for the year 1925–26, when the deficit was £285,337. The postal branch, which showed an increased profit of £125,950, was the main factor in the reduction of the total deficit, the increased revenue in that branch being accounted for chiefly by additional business transacted during the year and by increased poundage rates on postal notes. Although the telegraph branch showed a decrease in traffic receipts of £38,306, £17,500 of which was accounted for by reduced cable rates, the net result showed an improvement of £29,912, the reason being that annual charges totalling £81,347, representing a proportion of the maintenance and interest on lines used in a dual capacity, i.e., for both telegraph service and as telephone trunk lines, which in previous years were equally distributed between the telegraph branch and the telephone branch, were, during 1926–27, charged wholly against the telephone branch. This re-arrangement also accounts for the increase of £42,586 in the deficit shown by the telephone branch.

(*b*) *Branches, 1923 to 1927.* The following statement gives particulars of the operating results of each Branch for the period 1923 to 1927 :—

PROFIT OR LOSS, POSTMASTER-GENERAL'S DEPARTMENT, 1923–27.

Year Ended 30th June.	Branch—							
	Postal.		Telegraph.		Telephone.		All Branches.	
	Profit.	Loss.	Profit.	Loss.	Profit.	Loss.	Profit.	Loss.
	£	£	£	£	£	£	£	£
1923 ..	1,365,064	..	..	78,460	179,455	..	1,466,059	..
1924 ..	502,667	..	..	188,982	50,667	..	364,352	..
1925 ..	243,472	..	..	227,175	..	258,619	..	242,322
1926 ..	319,979	..	..	308,632	..	296,684	..	285,337
1927 ..	445,929	..	..	278,720	..	339,270	..	172,061

10. **Expenditure, Postmaster-General's Department.**—(i) *Distribution.* The following table shows, as far as possible, the distribution of expenditure on various items in each State during the year ended 30th June, 1927. The table must not be regarded as a statement of the working expenses of the Department, since items relating to new works, interest, etc., are included therein.

EXPENDITURE, POSTMASTER-GENERAL'S DEPT.—DISTRIBUTION, 1926-27.

Particulars.	Central Office.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Salaries and contingencies—	£	£	£	£	£	£	£	£
Salaries ..	50,829	2,079,765	1,444,929	793,057	553,283	420,757	182,307	5,524,927
Conveyance of mails	..	494,369	267,345	238,125	98,133	105,692	42,400	1,246 064
Contingencies ..	5,114	811,415	549,805	310,135	276,413	159,810	87,549	2,200,241
Ocean mails ..	129,195	..	..	..	..	..	..	129,195
Miscellaneous ..	10,561	26,477	20,057	8,806	6,240	3,837	2,667	78,645
Pensions and retiring allowances ..	..	45,449	52,108	165	..	12,707	..	110,429
Rent, repairs, maintenance ..	151	51,086	32,845	18,677	20,091	11,552	2,694	137,096
Supervision of works	..	..	..	..	..	24	228	252
Proportion of Audit Office expenses ..	..	3,988	2,902	1,496	967	642	364	10,359
New works—								
Telegraph and telephone ..	1,676	1,210,291	1,088,911	441,339	594,908	194,793	96,163	3,628,081
New buildings, etc.	..	148,778	58,349	34,847	53,478	8,015	14,239	317,706
Interest on transferred properties ..	..	79,872	42,779	31,943	26,287	16,120	6,977	203,978
Other	1,694,713 (*a*)	..	..	..	..	..	..	1,694,713
Total ..	1,892,239	4,951,490	3,560,030	1,878,590	1,629,800	933,949	435,588	15,281,686

(*a*) Particulars of apportionment to each State not available.

The decrease of £1,442,277 in the expenditure on new telegraph and telephone works was the principal factor governing the decline of £988,431 in the total expenditure, as compared with the year 1925-26.

(ii) *Total, 1923 to 1927.* The next table gives the actual payments made as shown by records kept for Treasury purposes in respect of the Postal Department for each of the years ended 30th June, 1923 to 1927 inclusive.

EXPENDITURE, POSTMASTER-GENERAL'S DEPT., 1923 TO 1927.

Expenditure.	Year ended 30th June—				
	1923.	1924.	1925.	1926.	1927.
	£	£	£	£	£
Total	10,752,373	13,487,891	14,887,929	16,270,117	15,281,686

The total expenditure for 1926–27 increased by 42 per cent. on the amount for 1922–23.

11. **Capital Account.**—The appended statement shows particulars of the fixed assets of the Postmaster-General's Department at 30th June, 1927.

DETAILS OF FIXED ASSETS, 30th JUNE, 1927.

Particulars.	Net Value, 1st July, 1926. (*b*)	Capital Expenditure, 1926–27.	Gross Value, 1st July, 1927.	Less Depreciation, &c. 1926-27. (*a*)	Net Value, 30th June, 1927.
	£	£	£	£	£
Telephone Lines and equipment	21,713,321	3,431,217	25,144,538	601,719	24,542,819
Telegraph Lines and Trunk Line equipment	7,829,664	931,440	8,761,104	125,283	8,635,821
Telegraph equipment	335,863	82,321	418,184	7,366	410,818
Postal equipment	170,798	8,222	179,020	1,195	177,825
Sites, Buildings, Furniture, and Office equipment	8,219,155	355,228	8,574,383	19,633	8,554,750
Miscellaneous	514,020	86,058	600,078	33,863	566,215
Total	38,782,821	4,894,486	43,677,307	789,059	42,888,248

(*a*) Includes Dismantled Assets, Depreciation written off, and Assets transferred.

(*b*) The variations between the figures shown in this column and those shown on page 337 of *Year-Book* No. 20 are due to a re-arrangement of the Asset Accounts from 1st July, 1926. The total is not affected.

During the past quinquennium the value of the fixed assets has more than doubled, the net value at 30th June, 1922, having been £21,143,004.

§ 2. Telegraphs.

1. **General.**—A review of the development of the Electric Telegraph Services in Australia was given in a previous issue of this work (see Year Book No. 15), but limitations of space preclude the repetition of this information in the present issue. The most important recent development in connexion with the Telegraph system is the application of the "Carrier-wave" system (see also § 5, Telephones). This system, with a maximum capacity of 10 duplex channels (initial equipment, 5 duplex channels), was put into operation in February, 1927, on the Melbourne–Sydney and Melbourne–Adelaide trunk line routes with one channel linked at Melbourne to provide a through carrier from Sydney to Adelaide upon which a "Creed" high speed printing telegraph is operated. A total of 5,400 channel miles (duplex) of "carrier" telegraph system is now in operation.

2. **Telegraph Offices, Length of Lines and Wire.**—(i) *Summary for Australia.* The following table shows the number of telegraph offices and the length of telegraph lines and of telegraph wire available for use in Australia in each year from 1923 to 1927:—

TELEGRAPHS.—AUSTRALIA, SUMMARY, 30th JUNE, 1923 TO 1927.

Particulars.	1923.	1924.	1925.	1926.	1927.
Number of offices	6,987	7,709	8,576	8,904	9,111
Length of wire (miles)—					
Telegraph purposes only	62,619	63,528	66,702	65,471	70,563
Telegraph and telephone purposes ..	91,461	105,351	126,086	149,989	158,470
Length of line (miles)—					
Conductors in Morse cable.. ..	2,139	2,201	2,399	3,123	3,280
Conductors in submarine cable ..	2,193	2,415	2,919	3,598	4,251
Pole routes (miles)	66,648	71,828	80,399	85,547	93,237

(ii) *Particulars for each State.* The following table gives corresponding particulars for each State for the year 1926–27 :—

TELEGRAPHS.—STATES, SUMMARY, 30th JUNE, 1927.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of offices ..	2,985	2,333	1,455	760	1,021	557	9,111
Length of wire (miles)—							
Telegraph purposes only	21,262	8,322	13,913	12,763	13,474	829	70,563
Telegraph and telephone purposes	50,958	31,639	40,186	15,089	13,833	6,765	158,470
Length of line (miles)—							
Conductors in Morse cable	1,389	1,374	406	..	97	14	3,280
Conductors in submarine cable (statute miles) ..	2,923	468	286	197	..	377	4,251
Pole routes (miles) ..	32,832	16,705	15,125	13,477	11,858	3,240	93,237

A total length of 229,033 miles of wire is available for telegraph purposes, of which 158,470 miles are also used for telephone purposes, and the figures show increases of 26,337 (11 per cent.) and of 20,715 miles (15 per cent.) respectively over the corresponding mileages for the previous year.

3. **Number of Telegrams Dispatched.**—(i) *Total for Australia.* The number of telegrams dispatched to destinations within Australia in each of the last five years is given hereunder :—

TELEGRAMS DISPATCHED.—AUSTRALIA, 1923 TO 1927.

Telegrams.	Year ended 30th June—				
	1923.	1924.	1925.	1926.	1927.
Number(*a*)	15,828,629	16,699,199	17,132,145	17,637,716	17,274,199

(*a*) Including interstate cablegrams.

(ii) *Totals for each State.* The appended table shows the total number of telegrams dispatched in each State in 1926–27 according to the class of message transmitted :—

TELEGRAMS DISPATCHED.—STATES, 1926-27.

Class of Message Transmitted within the Commonwealth.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
Paid and Collect—							
Ordinary ..	4,556,764	3,433,524	2,340,033	1,274,209	1,452,527	337,504	13,394,561
Urgent ..	762,736	272,402	225,417	106,263	79,591	17,832	1,464,241
Press ..	232,863	136,519	120,452	73,003	38,413	64,763	666,013
Lettergram ..	80,179	63,505	85,738	40,046	51,064	29,790	350,322
Total ..	5,632,542	3,905,950	2,771,640	1,493,521	1,621,595	449,889	15,875,137
Unpaid—							
Service ..	224,927	112,379	90,961	81,172	90,207	22,540	622,186
Shipping ..	64,863	124,557	19,339	6,673	24,710	9,570	249,712
Meteorological ..	168,445	76,680	75,110	68,439	114,643	23,847	527,164
Total ..	458,235	313,616	185,410	156,284	229,560	55,957	1,399,062
Grand Total ..	6,090,777	4,219,566	2,957,050	1,649,805	1,851,155	505,846	17,274,199

The figures in the foregoing table show a decrease in the total volume of telegraph business of 363,517 messages as compared with the previous year.

4. Letter-telegrams.—Letter-telegrams are accepted at any hour at telegraph offices which are open for business after 7 p.m., subject to the condition that delivery is effected by posting at the letter-telegram office of destination.

5. Revenue and Expenditure.—Particulars of the revenue and expenditure of the telegraph systems for the years 1922–23 to 1926–27 were given in earlier pages.

§ 3. Submarine Cables.

1. First Cable Communication with the Old World.—In earlier issues of the Year Book will be found a detailed account of the connexion of Australia with the old world by means of submarine cables. (See No. 6, p. 770.)

2. The Tasmania-Victoria Cables.—These cables were opened to the public on the 1st May, 1909. Their aggregate length is approximately 350 nautical miles of main cable, and 20 nautical miles each of intermediate and shore-end cable, making a total of 390 nautical miles.

3. The Eastern Extension Company's Cables.—In addition to the first Tasmania-Victoria cable and the original cable from Darwin (see Year Book No. 6, p. 770), the Eastern Extension Company has constructed several other cables connecting with various places in Australia, viz., Darwin to Banjoewanjie (two lines); Fremantle to Durban; Fremantle to Adelaide; Java to Cocos Island, which provides another route between Australia and South Africa. A cable partly owned by this Company connects the Darwin-Singapore cable with London via Hong Kong, Shanghai, Possiet Bay (Pacific Russia), Libau (Latvia), and Newbiggin (London).

4. The Pacific Cable.—(i) *Cable Lines.* The Pacific Cable lines are controlled by the Pacific Cable Board, which consists of two representatives each from the Imperial, Canadian and Australian Governments and one from New Zealand. The main cable route known as the "All Red" runs from Southport in Queensland to Bamfield (Vancouver Is.), thence overland to Montreal. From this point messages are transmitted across the Atlantic over the cables of the Anglo-American and Commerical Companies, or, if so desired, the Marconi Wireless System between Canada and the United Kingdom may be used for either homeward or outward messages. Cable stations are established at Norfolk Island, Fiji, and Fanning Island. A branch cable approximately 600 miles long runs from Norfolk Island to Doubtless Bay, North Island of New Zealand.

The assent of each of the Governments interested was obtained for the duplication of the system south of Fiji, and a contract for the submarine cables was placed with the Telegraph Construction and Maintenance Company of Greenwich. The laying of the Sydney–Southport cable was completed on 11th July, 1923, and the Auckland–Suva cable on 12th August, 1923. The duplication of the Suva (Fiji)–Bamfield (Vancouver Island) cable was completed in November, 1926. The total cost of duplication, including the cables laid south of Fiji in 1923, approximated £2,750,000.

(ii) *Financial Summary.* The receipts for the year 1926–27 amounted to £478,302 and exceeded the ordinary working expenses by £178,284. After payment of the annuity of £77,545 in respect of interest and repayment of the capital of £2,000,000, there remained a surplus of £100,739, which was transferred to the Reserve and Renewal Fund in compliance with the Pacific Cable Act 1927.

5. New Zealand Cables.—A submarine cable, 1,191 miles in length, from New Zealand to Australia, was laid in 1876. The Australian shore-end of the cable is at Botany Bay, while the New Zealand terminus is at Wakapuaka near Nelson in the Middle Island, whence another cable, 109 miles in length, is laid to Wanganui in the North Island. A second cable between New Zealand and Australia (Auckland to Sydney) was opened for traffic on the 31st December, 1912.

6. The New Caledonia Cable.—This cable was opened for use in October, 1893, the Australian shore-end being at Burnett Heads, near Bundaberg. The guarantees of the Governments of New South Wales and Queensland have since been transferred to the Commonwealth Government, but the agreement expired on 17th October, 1923, thus bringing to an end the payment by the Commonwealth Government of subsidies for cable services. On 13th September, 1923, there was an interruption in the cable, and, pending restoration, the traffic is being dealt with by wireless.

7. Length of Cable Routes.—The following statement shows the length of the several cable routes providing communication between Australia and Great Britain :—

LENGTH OF CABLE ROUTES.

Via South Africa.	miles.	Via Vancouver.	miles.
Sydney to Adelaide (land line)	960	Sydney to Southport (Q'ld.) ..	510
Adelaide to Perth	1,546	Southport (Q'ld.) to Norfolk Is.	837
Perth to Mauritius	4,274	Norfolk Is. to Suva	982
Mauritius to Durban	1,731	Suva to Fanning Is.	2,043
Durban to Cape Town ..	1,114	Fanning Is. to Bamfield ..	3,458
Cape Town to Madeira ..	5,590	Across Canada (land line) ..	3,400
Madeira to Port Curnow ..	1,344	Canada to Great Britain ..	3,477
Port Curnow to London (land line)	320		
Total	16,879	Total	14,707

Via Darwin.

	miles.
Adelaide to Darwin (land line)	2,134
Darwin to Banjoewanjie	1,444
Banjoewanjie to London	9,947
	13,525

8. Cable Business.—(i) *Australia.* The subjoined table shows the number of cablegrams received and dispatched in Australia from 1924–25 to 1926–27 :—

CABLEGRAMS.—AUSTRALIA, 1924-25 TO 1926-27.

Cablegrams.	Cablegrams Received.			Cablegrams Dispatched.			Total Cablegrams Received and Dispatched.		
	1924–25.	1925–26.	1926–27.	1924–25.	1925–26.	1926–27.	1924–25.	1925–26.	1926–27.
Number ..	617,394	671,047	690,625	641,408	696,208	720,496	1,258,802	1,367,255	1,411,121

(ii) *States.* The number of cablegrams received and dispatched in each State during the year 1926–27 is given hereunder :—

CABLEGRAMS.—STATES, 1926-27.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.(a)	Australia.
Number received ..	360,572	226,383	28,253	36,860	30,749	7,808	690,625
Number dispatched	357,860	240,786	33,339	42,354	36,743	9,414	720,496
Total ..	718,432	467,169	61,592	79,214	67,492	17,222	1,411,121

(a) Exclusive of interstate cablegrams, which are included with interstate telegrams.

9. Cable and Radio (Beam) Rates.—(i) *Ordinary Messages.* From 1st February, 1927, the cable rates (per word) between Australia and Great Britain were reduced as follows :—Ordinary, 2s. 6d. to 2s. ; deferred ordinary, 1s. 3d. to 1s. ; and Government, 1s. 4d. to 1s. 0½d., and substantial reductions were also made on the Canadian service (via Pacific) as from the same date. The following are the rates at present operating on traffic to the principal countries :—

CABLEGRAM AND RADIOGRAM RATES, JUNE, 1928.

To—	Rate per Word and Route.		
	Via Pacific.	Via Eastern.	Via Beam.
European Countries	2s. 6d. to 3s. 0d.	2s. 6d. to 2s. 7d.	1s. 11½d. to 2s. 5½d.
Asiatic Countries.. ..	6s. to 6s. 4d.	2s. 6d. to 4s. 6d.	..
Africa	..	2s. 2d. to 5s. 4d.	2s. 2½d. to 2s. 10d.
North America	1s. 7d. to 3s. 5d.	2s. 4d. to 4s. 4d.	1s. 5½d. to 3s. 1d.
Central America	3s. 10d. to 5s. 11d.	5s. to 7s. 2d.	2s. 11½d.
West Indies	3s. to 5s. 11d.	4s. to 6s. 2d.	..
South America	3s. 10d. to 8s. 6d.	4s. 1d. to 8s. 4d.	4s. 3d. to 6s. 9d.

On 1st March, 1927, the extra charge on cablegrams between Tasmania and oversea countries was removed, so that charges are now uniform throughout the States.

(ii) *Deferred Cable or Radio (Beam) Messages.* Under this system a reduction of 50 per cent. in the ordinary cable or radio (Beam) charges is made under certain conditions. Any such messages which have not reached their destination within 24 hours may be transmitted in turn with full-rate messages. This service, together with "Daily Letter" and "Week-end" cable services has affected the ordinary cable business to a considerable extent. "Deferred Press" cablegrams subject to a delay of 18 hours may be exchanged between Australia and (*a*) Great Britain at the rate of 4½d. per word by cable and 3d. per word via Beam wireless ; (*b*) Canada, at 2½d. per word by cable and 2¼d. per word via Beam wireless ; and (*c*) United States of America, at 3d. to 4d. per word by cable and 4d. per word via Beam wireless.

(iii) *Daily Letter Services.* The "Daily Letter" service was inaugurated in September, 1923, between Australia and Great Britain and Canada, and has since been extended to most countries in the British Empire and to the United States of America. "Daily Letter" messages are accepted subject to a maximum transit delay of 48 hours (including allowance for variations of times). The rates on messages (20 word minimum) to Great Britain are 9d. per word via "Pacific" or "Eastern," and 6d. per word via "Beam," while for United States of America the rate varies from 7d. to 9d. per word.

(iv) *Week-end Messages.* Week-end messages may be exchanged with certain specified countries at the rates indicated hereunder. Messages—which may be lodged at any post office—are forwarded to reach the transmitting station by post or telegraph by midnight on Saturdays and are deliverable to the addressees on Tuesday mornings. The rates per word for messages (20 word minimum) to the following countries are :—Great Britain, by cable 7½d., by wireless 5d. ; Holland, 9d. ; Canada, 5¾d. ; Newfoundland, 7¾d. ; Fanning Island, 6d. ; and Italy, 9d.

(v) *Press Messages.* The rate per word on press messages exchanged with Great Britain is 6d. via cable and 4d. via Radio (Beam) service.

(vi) *Night Letter Service*—A night letter service for traffic between Australia and New Zealand was introduced on 1st May, 1924. The rate is fixed at 3s. per message of 20 words, and 2d. per word in excess of 20. On 1st December, 1924, the service was extended to take in traffic to and from Fiji at the rate of 5s. 10d. per message of 20 words, and excess words at the rate of 3½d. per word. Night letter telegrams are accepted at any time and are delivered by first post on the morning following receipt.

§ 4. Telephones.

1. **Telephone Services.**—(i) *Mileage, etc., Australia.* The following table shows the mileage of lines, etc., for telephone purposes, giving trunk lines separately, on 30th June, 1925 to 1927:—

TELEPHONE LINES—AUSTRALIA, 30th JUNE, 1925 TO 1927.

Particulars.		1925.	1926.	1927.
Ordinary Lines—				
Conduits	duct miles	3,748	4,519	4,903
,, ...	route miles	2,039	2,420	2,631
Conductors in aerial cables	loop mileage	12,895	11,351	7,441
Conductors in underground cables ..	,,	409,754	517,868	576,298
Conductors in cables for junction circuits	,,	73,091	80,325	88,188
Open conductors	single wire mileage	247,937	296,024	344,370
Trunk Lines—				
Telephone trunk lines only	miles	85,201	104,480	120,282
Telegraph and telephone purposes ..	,,	126,086	149,989	158,470

(ii) *Comparison with Other Countries.* Australia is steadily improving its position in the list of countries showing the most rapid advance in the use of the telephone, and it now occupies sixth place, with 717 telephones per 1,000 of population. This position may be considered highly satisfactory in view of the area and distribution of population in Australia and the average length of wire required to provide a subscriber's service. The average length of wire per telephone in Australia is 4.2 miles, as compared with 3.6 miles in the United States of America, 3.3 miles in New Zealand, and 2.6 miles in Canada.

(iii) *Government Policy.* A vigorous policy is pursued by the Government in providing telephone facilities, with the result that the system has developed rapidly during recent years. Many of the concessions have been of such a character as to render the services unremunerative, but it is considered that they are justified from the standpoint of national development. The adoption of the present policy has been the means of making telephone services available to a very large number of people, and particularly to those living in isolated localities. In providing facilities to meet present and future growth, full advantage is being taken of the best modern practices as adopted in other parts of the world.

(iv) *Trunk Line System.* The trunk line system of the Commonwealth aims to make the telephone service in Australia a nation-wide service and to improve long distance communication so that each subscriber may communicate with every other subscriber to the system. Notwithstanding the great distances separating the capital cities of the various States, commercial speech is now provided between all of the cities in the Eastern States, and satisfactory conversations have already taken place between Cairns (Queensland) and Adelaide (South Australia), a circuit distance of 2,770 miles. It is hoped within the next year or two to provide a service between Adelaide and Perth (Western Australia) in order to complete the chain. To ensure satisfactory transmission, advantage has been taken of the recently developed high frequency carrier current systems.

(v) *Automatic Exchanges.* At 30th June, 1927, there were 38 automatic or semi-automatic exchanges in operation providing facilities for 92,369 subscribers, 89,819 of whom were in the metropolitan areas. On the same date 13 automatic exchanges, with a total capacity of over 40,400 subscribers, were in course of construction. It is proposed eventually to convert the whole of the exchanges in the metropolitan networks to machine switching. Trials are being made with a specially constructed automatic unit for use at country exchanges, and the results at present are promising. The purpose of this equipment is to provide an economic day and night service at country exchanges, and it is hoped that the introduction of small automatic units will enable the benefits of continuous service to be more widely extended.

(vi) *Summary for States.* Particulars relating to the telephone service in each State for the years ended 30th June, 1925 to 1927, will be found in the following table :—

TELEPHONE SERVICES.—SUMMARY, 1925 TO 1927.

Particulars.	Year (30th June.)	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
No. of Exchanges ..	1925	1,498	1,292	618	415	442	307	4,572
	1926	1,621	1,426	743	462	519	324	5,095
	1927	1,740	1,518	821	495	574	334	5,482
No. of Telephone Offices (Including Exchanges)	1925	2,623	2,139	1,314	681	854	511	8,122
	1926	2,756	2,226	1,380	729	934	520	8,545
	1927	2,870	2,264	1,413	739	955	523	8,764
No. of lines connected ..	1925	107,497	83,640	34,560	28,968	14,667	8,784	278,116
	1926	117,249	93,215	39,382	33,547	16,398	9,415	309,206
	1927	127,784	101,891	42,911	37,132	18,232	10,051	338,001
No. of instruments connected	1925	139,557	114,169	43,073	37,057	18,633	10,753	363,242
	1926	152,969	127,000	48,729	42,580	20,819	11,519	403,616
	1927	167,301	138,609	53,505	47,300	23,277	12,370	442,362
(*a*) No. of subscribers' instruments	1925	135,527	111,786	41,371	36,118	17,992	10,124	352,918
	1926	148,681	124,682	46,928	41,558	19,906	10,816	392,571
	1927	163,104	135,867	51,468	46,200	22,366	11,634	430,639
(*b*) No. of public telephones	1925	2,165	1,900	1,212	629	586	493	6,985
	1926	2,379	1,914	1,302	666	841	522	7,624
	1927	2,555	2,112	1,458	697	868	565	8,255
(*c*) No. of other local instruments	1925	1,865	483	490	310	55	136	3,339
	1926	1,909	404	499	356	72	181	3,421
	1927	1,642	630	579	403	43	171	3,468
Instruments per 100 of population	1925	6.13	6.83	5.04	6.77	5.06	5.08	6.13
	1926	6.58	7.49	5.54	7.57	5.55	5.50	6.68
	1927	7.03	8.03	5.98	8.22	6.05	5.94	7.17
		£	£	£	£	£	£	£
Earnings	1925	1,411,341	1,055,390	494,103	396,975	202,066	101,235	3,661,110
	1926	1,584,153	1,179,788	568,936	459,084	230,019	110,961	4,132,941
	1927	1,771,611	1,320,005	639,882	521,867	262,679	120,670	4,636,714
Working expenses ..	1925	1,216,284	856,164	443,820	322,263	168,945	121,437	3,128,913
	1926	1,298,084	969,963	498,543	384,075	203,720	132,849	3,487,234
	1927	1,437,290	1,012,961	590,284	444,825	239,528	139,319	3,864,207
		%	%	%	%	%	%	%
Percentage of working expenses to earnings	1925	86.18	81.12	89.82	81.18	83.61	119.96	85.46
	1926	81.94	82.22	87.63	83.66	88.57	119.73	84.38
	1927	81.13	76.74	92.25	85.24	91.19	115.45	83.34

The number of instruments per 100 of population has increased from 6.13 in 1924–25 to 7.17 in 1926–27. The actual number of instruments has increased from 363,242 to 442,362, an increase of 22 per cent. Of the 442,362 instruments connected as at 30th June, 1927, 193,367, or 43.7 per cent. were served by exchanges situated beyond the limits of the telephone networks of the six State capital cities. As a general rule, the metropolitan networks are limited to a radius of 10 miles from the General Post Office.

(vii) *Systems in Use.* The following table shows the percentage of Automatic, Common Battery, and Magneto Telephone lines at 30th June, 1925 to 1927 :—

PERCENTAGE OF AUTOMATIC, COMMON BATTERY, AND MAGNETO LINES, 1925 TO 1927.

System.	30th June.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Automatic	1925	26.8	23.3	..	18.7	35.7	..	21.1
	1926	34.5	23.5	7.8	18.2	33.4	..	24.8
	1927	37.2	24.4	16.5	18.3	32.8	..	27.2
Common Battery ..	1925	8.4	28.1	24.4	29.2	7.9	50.9	19.8
	1926	6.5	25.9	15.8	25.0	7.4	48.7	16.5
	1927	6.2	24.3	15.3	23.3	7.1	47.4	16.0
Magneto	1925	64.8	48.6	75.6	52.1	56.4	49.1	59.1
	1926	59.0	50.6	76.4	56.8	59.2	51.3	58.7
	1927	56.6	51.3	68.2	58.4	60.1	52.6	56.8

(viii) *Subscribers' Lines and Calling Rates.* The next table gives the number of subscribers' lines and the daily calling rate at central, suburban, and country telephone exchanges in the several States for the year 1926–27 :—

TELEPHONES.—SUBSCRIBERS' LINES AND DAILY CALLING RATE, 1926-27.

State.	Central Exchanges.		Suburban Exchanges.		Country Exchanges.		Total.	
	Subscribers' Lines.	Average Outward Calls Daily per line.	Subscribers' Lines.	Average Outward Calls Daily per line.	Subscribers' Lines.	Average Outward Calls Daily per line.	Subscribers' Lines.	Average Outward Calls Daily per line.
New South Wales	13,656	10.47	56,075	3.79	51,231	2.00	120,962	3.79
Victoria ..	9,928	9.69	46,790	3.87	40,252	1.48	96,970	3.47
Queensland ..	6,464	8.53	9,721	3.16	26,247	2.35	42,432	3.48
South Australia	8,597	7.70	11,604	4.90	15,439	1.40	35,640	4.06
Western Australia	5,409	6.47	3,133	4.10	7,654	1.73	16,196	3.77
Tasmania ..	2,542	4.39	864	2.36	6,138	1.84	9,544	2.57
Australia ..	46,596	8.73	128,187	3.87	146,961	1.84	321,744	3.64

A comparison of the daily calling rates for each class of exchange shows that New South Wales registered the greatest number per line at central exchanges, South Australia at suburban exchanges, and Queensland at country exchanges. For Australia as a whole, the average number of calls per line at central exchanges was more than double the number registered at suburban exchanges, while the average for suburban exchanges was slightly more than double the number shown for country exchanges.

(ix) *Trunk Line Calls and Revenue.* In the following table the number of telephone trunk line calls recorded, the amount of revenue received, and the average revenue per call are shown for each of the States for the years 1924–25 to 1926–27 :—

TELEPHONES—TRUNK LINE CALLS AND REVENUE FOR THE YEARS 1924-25 TO 1926-27.

Particulars.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
Total Calls for Year—	No.	No.	No.	No.	No.	No.	No.
1924-25 ..	7,843,286	5,639,117	3,545,610	2,448,991	1,103,644	1,094,802	21,675,450
1925–26 ..	9,278,995	6,894,247	4,273,321	3,009,375	1,365,845	1,263,448	26,085,231
1926–27 ..	10,333,612	7,555,055	4,763,831	3,395,557	1,644,292	1,329,783	29,022,130
Total Revenue for Year—	£	£	£	£	£	£	£
1924–25 ..	261,940	184,809	153,354	97,359	48,887	30,691	777,040
1925–26 ..	323,492	225,243	191,880	116,462	62,884	35,641	955,602
1926–27 ..	382,489	258,635	221,337	131,932	77,512	39,197	1,111,102
Average Revenue per Call—	Pence.	Pence.	Pence.	Pence.	Pence.	Pence.	Pence.
1924–25 ..	8.01	7.86	10.38	9.54	10.63	6.73	8.60
1925–26 ..	8.37	7.84	10.77	9.29	11.95	6.77	8.39
1926–27 ..	8.88	8.22	11.15	9.32	11.31	7.07	9.19

The number of trunk line calls recorded during 1926–27 increased by nearly 3 millions over the figures for the previous year, and the average revenue per call increased by 0.80 per call.

The rapid growth in connexion with subscribers' services is bringing about increased trunk line traffic, and extensive works are in progress to meet the growing demand and to improve the trunk line system generally.

2. **Revenue from Telephones.**—Particulars regarding the revenue from telephone services are included in the tables at the end of § 1.

§ 5. Radio Telegraphy and Telephony.

1. **Radio Telegraphy and Telephony.**—(i) *General.* A statement in regard to the initial steps taken to establish radio telegraphy in Australia was given in Official Year Book No. 18, p. 343, but consideration of space precludes its repetition in the present issue.

With the exception of the war period, licences for experimental and amateur stations have been issued since 1911, with restrictions on the use of transmitting equipment.

The regulations were amended in 1920 with a view to encouraging the erection of "land" stations by pastoralists and others in remote districts, but very few satisfactory applications were received. The Department, however, at the end of 1925 opened stations at Wave Hill and at Camooweal to collect and distribute messages from private stations that might subsequently be erected in the Northern Territory or Western Queensland. One such station has been erected at Brunette Downs.

The Department took over a private station at Maria Island, Tasmania, on 1st June, 1927, and now operates it in conjunction with the Post Office at that point. During 1927, stations were erected by Amalgamated Wireless (Australasia) Ltd. at Salamoa and Bulolo, on the New Guinea gold-fields, and, in 1928, at Marienberg, New Guinea, while the station at Morobe was closed.

Regulations under the Navigation Act require that all ships registered in Australia of 1,600 tons or more registered tonnage, or carrying more than 12 passengers, shall be fitted with an efficient radio telegraphy installation. At the end of June, 1928, there were 115 vessels so equipped.

Two Class "A" broadcasting stations are in operation in New South Wales and in Victoria and 1 each in the other States. Class "B" stations are in operation as follows, viz. :—New South Wales, 7 ; Victoria and South Australia, 2 each ; and Queensland 1.

On 28th January, 1927, a Royal Commission was appointed to report upon—

(1) Wireless broadcasting within the Commonwealth in all its aspects, with power to recommend any alterations deemed necessary in the policy and practices at present in force, and

(2) the development and utilization of wireless services for public requirements within the Commonwealth.

The Commission presented its report to the Governor-General on 14th July, 1927. Up to the present the main results have been (*a*) an amendment to the agreement between the Commonwealth and Amalgamated Wireless (Australasia) Ltd. and (*b*) a reduction in listeners' licence-fees. The amending agreement provides, *inter alia*, that Amalgamated Wireless (Australasia) Ltd. shall make its patents available free of charge for a period of five years to broadcasters, traders and listeners, in return for which the Government undertakes to pay to the Company the sum of 3s. per annum on each listener's licence. The total amount received by the Company in this way is considerably less than was previously due to it, the intention of the agreement being that the listeners and the traders should benefit by the reduced royalty payments. The Postmaster-General's proportion of the licence-fee was also reduced.

(ii) *Broadcasting.* (*a*) *Licences, etc.* The regulations issued in 1924 as amended to date prescribe the licence-fees to be paid by owners of receiving sets and by experimenters. As a result of the amended agreement above-mentioned, the broadcast listeners' annual licence-fee was reduced from 27s. 6d. to 24s. in Zone 1, and from 22s. 6d. to 17s. 6d. in Zone 2, the fee for Zone 3 being unaltered. In addition a uniform receiving licence was introduced, and dealers' licences, special licences and temporary licences were abolished. The amended rates and conditions became operative from 1st January, 1928. The annual fees and the distances from the capital city of the respective zones are as follows :—

Class of Licence.	Zone 1. Up to 250 Miles.	Zone 2. 250 to 400 Miles.	Zone 3. Beyond 400 Miles.
	£ s. d.	£ s. d.	£ s. d.
Broadcast listeners' licences	1 4 0	0 17 6	0 17 6
Experimental licences	1 0 0	0 17 6	0 15 0

In addition to the licences referred to above, the regulations provide for the issue of the following licences, for which the respective fees per annum, payable in advance, are £1, viz. :—(*a*) Coast Station, (*b*) Ship Station, (*c*) Land Station, (*d*) Portable Station, and (*e*) Aircraft Station.

Of the revenue obtained from the licence fees, the Postal Department retains 4s. for each broadcast listener's licence and 13s. for each experimental licence. Of these amounts, 3s. is paid to Amalgamated Wireless (Australasia) Ltd., and the remainder of the revenue is available for distribution to the broadcasting company or companies in the State in which the revenue is collected. The companies must supply a satisfactory programme, use the authorized power, and provide effective transmission.

Two classes of broadcasting stations may operate, viz. :—Class "A"—in respect of which the receiving licence fees are payable, and Class "B"—in respect of which no receiving licence revenue is payable. In New South Wales and Victoria two Class "A" stations only may be licensed. In New South Wales the licensees of these stations receive 60 per cent. and 40 per cent. and in Victoria 70 per cent. and 30 per cent. respectively of the licence fees available for distribution. In the other States one Class "A" station only may be licensed, and the whole of the "available revenue" for the particular State will be payable in respect of the station. The fees payable to the Department for Class "A" licences are £15, and for Class "B" £5, the licence being valid for a period of 5 years.

The following tables show the number of each class of licence issued in each State, etc., during the years 1926–27 and 1927–28 :—

WIRELESS LICENCES, 1926-27.

Station Licence.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	Aust.	Papua.	Grand Total.
Coast	1	1	5	1	5	3	1	17	2	19
Ship	32	59	7	17	3	..	..	118	..	118
Land	4	3	1	..	..	1	..	9	2	11
Broadcasting—										
"A"	2	2	1	1	1	1	..	8	..	8
"B"	7	2	1	2	..	..	..	12	..	12
Broadcast listeners'—										
Ordinary ..	56,908	113,612	22,226	15,904	3,616	1,142	..	213,408	..	213,408
Special	46	94	13	404	4	2	..	563	..	563
Temporary ..	41	40	51	25	1	7	..	165	..	165
Experimental—										
Transmitting and receiving ..	134	134	52	49	31	23	..	423	2	425
Receiving only ..	149	116	26	25	20	8	..	344	6	350
Dealers' listening ..	860	943	295	324	47	52	..	2,521	..	2,521
Portable	5	..	..	..	..	..	..	5	..	5
Aircraft	..	..	..	..	..	..	..	..	..	..
Total Licences issued	58,189	115,006	22,678	16,752	3,728	1,239	1	217,593	12	217,605

WIRELESS LICENCES, 1927-28.

Station Licence.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	Aust.	Papua.	Grand Total.
Coast	1	1	5	1	5	3	1	17	8	25
Ship	24	56	12	18	5	..	..	115	..	115
Land	4	3	2	..	..	..	..	9	3	12
Broadcasting—										
"A"	2	2	1	1	1	1	..	8	..	8
"B"	7	2	1	2	..	..	..	12	..	12
Broadcast listeners' ..	79,931	137,503	25,172	20,247	3,727	3,141	..	269,721	39	269,760
Experimental—										
Transmitting and receiving ..	140	154	58	58	30	25	..	465	2	467
Receiving only ..	126	101	14	14	17	6	..	278	2	280
Portable	6	2	6	1	..	..	..	15	..	15
Aircraft	..	..	..	..	..	..	..	..	..	..
Special	16	7	..	..	..	..	..	23	..	23
Total Licences issued	80,257	137,831	25,271	20,342	3,785	3,176	1	270,663	54	270,717

Licences previously issued by the Minister for the Navy under the Naval Defence Act 1910–1918, or by the Postmaster-General under the Act, and which were in force on 1st December, 1922, are not prejudiced by these Regulations.

Licences for the Territory of New Guinea are issued by the Administrator at Rabaul.

(*b*) *Simultaneous Delivery.* A development of some importance was the linking-up of several radio broadcasting stations for simultaneous broadcasting, which was successfully accomplished for the first time on 20th August, 1925, to enable an address to be delivered on the War Conversion Loan then being floated.

The speech was delivered at the Central Telephone Exchange, Melbourne, and by means of the telephone trunk lines and amplifying apparatus, was distributed to the studios of broadcasting stations in Brisbane (1,243 miles), Sydney (592 miles), Melbourne, and Adelaide (485 miles). The audience was estimated at 250,000 persons, and the area covered about two million square miles.

On the occasion of the opening of Federal Parliament at Canberra on 9th May, 1927, by H.R.H. the Duke of York, the speeches and ceremonies were again similarly broadcast. Receiving sets and loud speakers were set up in schools, halls, and other public places, and voice projectors were used in some of the principal streets of capital cities. A speech by Mr. L. S. Amery, the British Secretary of State for Dominions, was also similarly broadcast from Canberra in November, 1927.

(iii) *Beam Wireless.* The Beam wireless stations provided for under the agreement between the Commonwealth Government and Amalgamated Wireless (Australasia) Ltd. were completed early in 1927, and a direct beam wireless service to England was established on 8th April, 1927. A similar service to Canada, United States and Mexico was opened on 16th June, 1928. Satisfactory communication is maintained daily over a period of hours, and the new services are being well patronized by the public. Preliminary tests have been made between Canada and Australia, and the early opening of this service is anticipated. A comparison of the rates charged for "Beam" and Cable messages is given in § 3, Submarine Cables. Particulars of international traffic via "Beam" are given in para. (v) (*a*) hereunder.

(iv) *Radio Stations* (*Pacific Ocean.*) Radio-telegraphic stations have been erected at Suva, Ocean Island, Tulagi, and Vila under the control of the High Commissioner of the Pacific, while the New Zealand Government has erected high-power stations at Awanui (Auckland), Awarua (Bluff), and Apia (Samoa), and low-power stations at Auckland, Chatham Islands, Raratonga (Cook Islands) and Wellington.

(v) *Radiotelegraphic Traffic.* (*a*) *International.* The following statement shows particulars of international traffic "via Beam" to and from United Kingdom and other places during the period 8th April to 30th June, 1927:—

RADIO TRAFFIC.—INTERNATIONAL, 8th APRIL to 30th JUNE, 1927.

Class of Traffic.	Number of Words Transmitted.			Number of Words Received.		
	United Kingdom.	Other Places.	Total.	United Kingdom.	Other Places.	Total.
Ordinary	108,305	12,825	121,130	79,442	3,699	83,141
Deferred	61,809	19,776	81,585	48,528	3,355	51,883
Government	5,843	..	5,843	6,834	..	6,834
Press (including Deferred press)	34,437	..	34,437	136,575	..	136,575
Daily letter and week-end telegrams	516,996	431	517,427	292,555	..	292,555
Total	727,390	33,032	760,422	563,934	7,054	570,988

(*b*) *Coast Stations.* Particulars of the traffic handled by the several coast stations during the year 1926–27 are as follows:

RADIO TRAFFIC.—COAST STATIONS, 1926-27.

State or Territory.	Particulars.				
	Total. Paying Words.	Messages.			
		Paying.	Service.	Weather.	Total.
	No.	No.	No.	No.	No.
New South Wales ..	420,794	33,696	427	3,162	37,285
Victoria	145,970	11,060	15	1,623	12,698
Queensland	1,061,622	54,642	1,894	14,495	71,031
South Australia	83,542	6,680	299	1,575	8,554
Western Australia ..	237,698	17,617	460	4,066	22,143
Tasmania	154,619	9,674	459	488	10,621
Northern Territory ..	17,924	1,100	5	1,523	2,628
Australia	2,122,169	134,469	3,559	26,932	164,960
Papua	348,379	17,820	824	1,220	19,864
Grand Total ..	2,470,548	152,289	4,383	28,152	184,824

(*c*) *Island Stations.* Particulars of the island radio traffic dealt with during the year 1926–27 are given hereunder:—

RADIO TRAFFIC.—ISLAND STATIONS, 1926-27.

Particulars.	To Australia.	From Australia.	Inter-Island.	Ship.	Service.	Total.
Messages	15,272	10,575	7,086	1,484	..	34,417
Words	274,896	190,352	127,547	26,717	..	619,512

(vi) *Proficiency Certificates.* Proficiency certificates for commercial wireless operators are issued by the Minister to individuals who pass the specified tests. Amateur operators' certificates and watchers' certificates are, in addition, issued to successful candidates at the prescribed examinations.

Every ship-station and coast-station, in respect of which a licence is issued, must be operated by a person holding a certificate of proficiency.

At 30th June, 1928, 953 first-class and 48 second-class commercial and 416 amateur proficiency certificates, in addition to 69 watchers' certificates, had been issued.

§ 6. Research Section.

The Postmaster-General's Department, in pursuance of its policy of improving and extending the system of electrical communication in Australia, has created a Research Section, whose functions are indicated hereunder :—

(i) Investigation of technical problems that arise in telephone, telegraph, and radio systems of the Department or under its control.

(ii) Supervision of the transmission design of the trunk line network of the Commonwealth, wire and radio, in order to produce a co-ordinated system wherein a subscriber at any place in the Commonwealth will be able to converse easily and clearly with a subscriber in any other place. The possible future requirements of international and inter-Empire telephony are also included in these studies.

(iii) Co-operative work with other bodies in research into the propagation of radio waves and factors influencing radio communication generally.

(iv) Supervision of the initial installations of new forms of communication apparatus, such as carrier systems, radio links in the trunk line system, special forms of telephone repeaters and the larger simultaneous broadcasting events.

The nucleus of the staff was established in 1924, and the strength at 30th June, 1927, was 11, with laboratory equipment valued at £12,209.

CHAPTER VIII.

FINANCE.

A. COMMONWEALTH FINANCE.

§ 1. General.

1. Financial Provisions of the Constitution.—The main provisions of the Constitution relating to the initiation and development of the financial system of the Commonwealth are contained in Chapter IV., "Finance and Trade," being sections 81 to 105 of the Constitution Act. Two other sections which have a most important bearing on questions of Commonwealth finance are sections 69 and 51.

Section 69 provides for the transfer to the Commonwealth from the States of certain specified departments, while section 51, in outlining the powers of the Federal Parliament, implies the transfer or creation of various other departments. Section 87 deals with the financial relations between the Commonwealth and the States. These matters have been treated in some detail in previous issues of the Official Year Book up to and including No. 12, and further reference to them will not be made here.

The Commonwealth Treasury issues annually a document entitled "The Treasurer's Statement of Receipts and Expenditure during the year ended 30th June," with which is incorporated the report of the Commonwealth Auditor-General for the year. This series of annual statements is the principal authority for the majority of the tables given herein.

2. Accounts of Commonwealth Government.—The Commonwealth Government, like the States Governments, bases its accounts mainly upon three funds, the Consolidated Revenue Fund, the Trust Fund, and the Loan Fund. The last mentioned fund came into existence in the financial year 1911–12, but on the outbreak of war it became so important that it is treated in two parts—a General Loan Fund mainly for purposes of Public Works, and a War Loan Fund for purely military purposes. The accounts of these funds are now so interwoven that a complete view of Commonwealth Finance can hardly be obtained by separate analysis of each. Two tables are therefore appended, showing receipts and disbursements from all sources for the last five years. The different funds will then be treated in detail in the subsequent paragraphs.

COMMONWEALTH RECEIPTS, 1922–23 TO 1926–27.

Heading.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
Consolidated Revenue ..	64,720,635	66,017,203	68,854,809	72,285,806	78,168,235
Trust Funds in aid of Revenue ..	6,408,424	7,428,574	2,591,153	3,109,530	285,897
Total	71,129,059	73,445,777	71,445,962	75,395,336	78,454,132
Loan Fund	10,398,867	40,762,300	16,565,704	32,814,796	7,755,173
Unexpended Balance from previous year	9,711,262	5,854,066	2,487,812	3,411,612	6,212,225
Total	20,110,129	46,616,366	19,053,516	36,226,408	13,967,398
Grand Total	91,239,188	120,062,143	90,499,478	111,621,744	92,421,530

COMMONWEALTH EXPENDITURE, 1922–23 TO 1926–27.

Heading.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
Expenditure from Consolidated Revenue	50,106,510	48,685,757	56,709,988	63,048,182	66,983,829
Balance paid into Special Trust Funds	7,428,574	2,591,153	3,109,530	285,897	2,921,454
Expenditure from Special Trust Funds	6,408,424	7,428,574	2,591,153	3,109,530	285,897
Subsidy to States	7,185,551	7,324,538	7,535,291	7,951,727	8,262,912
Surplus allocated to Naval Construction	..	2,500,000	..	..	..
Special Redemptions from Revenue	..	4,915,755	1,500,000	1,000,000	..
Total	71,129,059	73,445,777	71,445,962	75,395,336	78,454,132
Loan Fund Expenditure—					
New Works, etc.	5,383,949	6,060,048	6,341,758	7,678,856	7,051,128
War Services	4,628,979	2,412,015	975,612	324,224	697,289
Redemptions	4,243,135	35,656,491	8,324,534	22,011,103	2,995,612
Unexpended Balance	5,854,066	2,487,812	3,411,612	6,212,225	3,223,369
Total	20,110,129	46,616,366	19,053,516	36,226,408	13,967,398
Grand Total	91,239,188	120,062,143	90,499,478	111,621,744	92,421,530

§ 2. Consolidated Revenue Fund.

Division I.—Nature of Fund.

The provisions made for the formation of a Commonwealth Consolidated Revenue Fund, and the means to be adopted for operating on that fund, are contained in sections 81, 82, and 83 of the Constitution. In section 81 it is provided that "All revenues or moneys raised or received by the Executive Government of the Commonwealth shall form one Consolidated Revenue Fund, to be appropriated for the purposes of the Commonwealth in the manner and subject to the charges and liabilities imposed by this Constitution." A strictly literal interpretation of this section would appear to require all loan and trust moneys received by the Commonwealth Executive to be paid to Consolidated Revenue. It is, however, held by Quick and Garran, in their "Annotated Constitution," that the "generic word *moneys* must be controlled by the preceding specific word *revenues*, and limited to moneys in the nature of revenue." This is the view of the matter which has been adopted by the Commonwealth Treasury in the preparation of its accounts. At present, certain moneys received by the Commonwealth, which are not of the nature of revenue, are paid to Trust Account, and other moneys are paid to Loan Account. As regards expenditure from the Consolidated Revenue Fund, section 82 provides that the costs, charges, and expenses incident to the collection, management, and receipt of the Consolidated Revenue Fund should form the first charge thereon, while section 83 stipulates that "no money shall be drawn from the Treasury of the Commonwealth except under appropriations made by law." Such appropriations are either special, and as such are provided for by means of a permanent Act, or annual, and provided for in an annual Appropriation Act.

Division II.—Revenue.

1. **Total.**—The consolidated revenue of the Commonwealth, which in 1901–2, the first complete financial year under the new régime, amounted to £11,296,985, had, in 1926–27, reached a total of £78,168,235, an increase in the period of £66,871,250.

The total amount of revenue collected by the Commonwealth Government during each of the last five years is shown in the following table :—

COMMONWEALTH CONSOLIDATED REVENUE, 1922–23 TO 1926–27.

Revenue.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
Total ..	64,720,635	66.017,203	68,854,809	72,285.806	78,168,235

The increase in recent years is mainly due to the expansion in taxation, which is considered in detail in a later sub-section.

2. **Revenue per Head.**—The next table shows the amount of revenue from various sources per head of population for the last five years :—

COMMONWEALTH CONSOLIDATED REVENUE PER HEAD, 1922–23 TO 1926–27.

Source of Revenue.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*
Taxation	8 17 1	8 16 11	8 19 11	9 1 6	9 13 1
Public Works and Services	1 14 9	1 13 11	1 15 2	1 17 1	1 19 7
Other Receipts	0 17 11	0 18 10	0 19 5	1 2 8	1 3 2
Total	11 9 9	11 9 8	11 14 6	12 1 3	12 15 10

3. **Sources of Revenue.**—(i) *General.* The following table furnishes details of the revenue from each source during the years 1922–23 to 1926–27 :—

COMMONWEALTH CONSOLIDATED REVENUE—SOURCES, 1922–23 TO 1926–27.

Source.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
Taxation—	£	£	£	£	£
Customs	22,597,306	25,177,882	26,405,161	27,839,889	31,832,600
Excise	10,274,823	10,572,902	10,787,620	11,358,989	11,719,878
Land Tax	2,018,876	2,030,127	2,519,711	2,521,910	2,615,900
Estate Duty	1,172,935	1,320,911	1,381,051	1,411,336	1,362.351
Income Tax	12,904,518	11,057,555	11,136,344	10,858,046	11,126.278
Entertainments Tax	629,802	622,460	680,586	460,326	366.159
War Time Profits Tax	286,757	70,646	*Dr.* 74,783	*Dr.* 77,491	*Dr.* 28,357
Total	49,885,017	50,852,483	52,835,690	54,373,005	58,994,809
Public Works and Services—					
Postal	9,792,273	9,757,021	10,044,486	10,771,756	11,606,819
Railways	230.136	232,406	287,037	349,768	477,734
Other	14,340	..	..	..	..
Total	10,036,749	9,989,427	10,331,523	11,121,524	12,084,553
Other Revenue—					
Interest, Discount, etc.	2,574,962	2,386,136	3.358,239	4,594,346	5,074,694
Coinage	137,696	151,682	107,275	332,014	373,071
Defence	223,402	315,708	139,078	130,662	152,494
Quarantine	41,388	38,445	36,599	30,553	40,451
Territories (*a*)	28,189	30,658	38,720	41,973	34,385
Patents, etc.	40,491	37,770	39,026	42,017	41,594
Lighthouses	173,363	179,733	205,170	198,353	202,148
Pension Contributions	58,205	56,638	51,868	56,781	51,575
Defence Trust Account	102,419	40,565	7,413	..	..
Net Profit on Australian Note Issue	1,072,893	1,264,583	1,277,975	1,048,062	852,357
Miscellaneous	345,861	673,375	426,233	316,516	266,109
Total	4,798,869	5,175,293	5,687,596	6,791,277	7,088,873
Grand Total	64,720,635	66,017,203	68,854,809	72,285,806	78,168,235

(*a*) Exclusive of Railways and other items which appear elsewhere under their appropriate headings.

The revenue from taxation reached its highest point in 1926–27 with upwards of £58,994,809. This represents an increase of more than £4,600,000 over that of 1925–26, the previous record collection. The increase was principally due to Customs and Excise receipts. With the exception of the year 1923–24, when there was a slight decrease, the postal receipts have shown a consistent upward tendency.

(ii) *Taxation.*—(*a*) *Customs Revenue.* Particulars for the five years 1922–23 to 1926–27 are furnished in the following table :—

COMMONWEALTH CUSTOMS REVENUE, 1922–23 TO 1926–27.

Classes.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
Stimulants	2,294,264	2,604,200	2,740,191	2,945,846	2,908,982
Narcotics	1,699,023	1,746,785	1,889,604	2,075,940	2,201,550
Sugar	10,723	12,995	10,414	20,438	20,112
Agricultural products	1,156,209	1,296,361	1,118,219	1,287,944	1,547,711
Apparel and textiles..	5,825,461	5,174,929	5,524,439	5,179,366	6,233,206
Metals and machinery	3,732,677	4,323,070	4,433,374	4,895,918	5,654,629
Oils, paints, etc. ..	563,257	696,235	792,994	950,991	2,173,367
Earthenware, etc. ..	557,017	631,056	654,120	688,321	735,699
Drugs and chemicals	536,975	444,587	465,174	525,649	561,530
Wood, wicker and cane	1,054,543	1,209,814	1,152,269	1,349,687	1,384,469
Jewellery, etc. ..	723,180	773,206	875,365	866,799	951,691
Leather, etc. ..	1,131,572	1,561,086	1,576,032	1,770,373	1,577,765
Paper and stationery	746,906	723,267	724,370	682,745	751,254
Vehicles	1,553,355	2,673,447	3,038,209	3,064,427	3,340,556
Musical instruments ..	248,467	460,445	504,419	466,054	520,482
Miscellaneous articles	706,572	796,069	845,993	1,007,789	1,192,059
Other receipts ..	57,105	50,330	59,975	61,602	77,538
Total Customs ..	22,597,306	25,177,882	26,405,161	27,839,889	31,832,600

The large increase in 1923–24 over previous years may be ascribed to the increase in imports due to a considerable extent to heavy borrowings abroad by the Commonwealth and State Governments, while the rise in 1924–25 and 1925–26 is due merely to increased trade resulting from the prosperity of the seasons. The particularly large increase in 1926–27 is due partly to increased imports as a result of borrowings abroad and an amended Customs tariff.

(*b*) *Excise Revenue.* Particulars concerning the amount of Excise collected under each head during each of the years ending 30th June, 1923 to 1927, are given hereunder :—

COMMONWEALTH EXCISE REVENUE, 1922–23 TO 1926–27.

Particulars.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
Beer	5,498,800	5,501,648	5,642,646	5,847,974	6,103,004
Spirits	1,617,975	1,757,414	1,766,526	2,026,415	2,061,573
Tobacco	3,124,926	3,284,594	3,349,095	3,457,052	3,533,984
Starch	20,342	16,818	17,368	15,539	9,647
Licences	12,780	12,428	11,985	12,009	11,670
Total Excise ..	10,274,823	10,572,902	10,787,620	11,358,989	11,719,878

(c) *Land Tax.* Details in regard to rates of tax, etc., will be found in Official Year Book No. 14 at the end of Section XX.

It will be seen from the appended table that the yield of the tax during the past five years has been fairly constant, the increase of nearly £500,000 in 1924–25 being due to the collection of arrears and of taxes due on Crown leaseholds.

COMMONWEALTH LAND TAX COLLECTIONS, 1922–23 TO 1926–27.

State.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
New South Wales ..	900,330	854,589	1,172,317	1,079,414	1,070,670
Victoria..	748,016	818,328	944,997	1,074,265	1,094,050
Queensland	70,398	91,106	114,874	46,138	79,445
South Australia	181,893	162,593	182,191	198,630	258,521
Western Australia ...	80,952	64,345	62,503	78,778	71,379
Tasmania	37,287	39,166	42,829	44,685	41,835
Total	2,018,876	2,030,127	2,519,711	2,521,910	2,615,900

(d) *Estate Duty.* Collections from this source for the five years 1923 to 1927, are given hereunder :—

COMMONWEALTH ESTATE DUTY COLLECTIONS, 1922–23 TO 1926–27.

Year.	N.S.W.	Vic. (b)	Q'land.	S. Aust.(a)	W. Aust.	Tas.	Total.
	£	£	£	£	£	£	£
1922–23 ..	483,616	397,489	100,158	132,833	41,455	17,384	1,172,935
1923–24 ..	477,974	555,324	87,278	147,035	27,322	25,978	1,320,911
1924–25 ..	604,358	496,723	87,820	116,930	58,380	16,820	1,381,051
1925–26 ..	547,712	515,570	95,827	180,991	41,993	29,243	1,411,336
1926–27 ..	479,011	544,600	128,096	159,405	26,051	25,188	1,362,351

(a) Including Northern Territory. (b) Including Central Office.

(e) *Income Tax.* The first Commonwealth Income Tax was levied during the financial year 1915–16. The legislation on the subject comprises the Income Tax Assessment Act No. 34 of 1915, and subsequent amending Acts. Full details as to the original Acts are to be found in Commonwealth Official Year Book No. 9. The result of the last five years' collections was as follows :—

COMMONWEALTH INCOME TAX COLLECTIONS, 1922–23 TO 1926–27.

State in which Collected.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
New South Wales ..	4,274,432	3,629,203	3,579,546	3,640,219	4,365,567
Victoria (a).. ..	5,525,429	4,873,611	5,159,331	4,703,200	4,564,995
Queensland.. ..	1,209,829	1,011,458	679,745	980,852	914,269
South Australia ..	1,072,821	713,042	1,110,015	844,076	803,730
Western Australia ..	524,781	552,779	327,607	501,982	367,565
Tasmania	292,641	274,510	277,226	185,024	108,130
Northern Territory ..	4,585	2,952	2,874	2,693	2,022
Total ..	12,904,518	11,057,555	11,136,344	10,858,046	11,126,278

(a) Including Central Office.

Agreements between the Commonwealth and all the States except Western Australia were made in 1923 with respect to the collection of Commonwealth Income Tax. These agreements came into operation in the cases of New South Wales, Victoria, and South Australia on 1st July, 1923, Tasmania on 10th October, and Queensland on 31st October, 1923. It is provided in each agreement that the Commonwealth Tax and the State Tax shall be collected by an officer acting for the Commonwealth and State, the Commonwealth appointing the State Commissioner as Deputy Commissioner for the State under the Income Tax Assessment Act of the Commonwealth. Provisions are included relating to the transfer of officers, the accounting of receipts, and the division of expenses. A joint form of Income Tax return is to be used in cases where the income is derived in one State only. The respective agreements are to remain in operation for a period of five years, and thereafter until the expiration of not less than six calendar months, upon notice in writing by either party to the agreement.

In Western Australia an arrangement was made previously by which the Commonwealth undertakes the collection of the State Income Tax.

(*f*) *Entertainments Tax.* The rate of Entertainments Tax, according to Amending Act No. 15 of 1922 which came into force on the 2nd October, 1922, is as follows :—For tickets of 1s., 1d. ; exceeding 1s., 1d. for the first shilling, and ½d. for every subsequent sixpence or part of sixpence. By an Amending Act (No. 23 of 1925) the rate is now twopence halfpenny for a payment of two shillings and sixpence, and one halfpenny for every subsequent sixpence or part thereof. The collections for the last five years are given hereunder.

The decreased returns for 1922–23 and 1923–24 as compared with 1921–22 result from the exclusion from taxation as from the 2nd October, 1922, of amounts for admission under one shilling. The decrease in the collections during the past two years is due to the remission of taxation on tickets less than two shillings and sixpence.

COMMONWEALTH ENTERTAINMENTS TAX COLLECTIONS, 1922–23 TO 1926–27.

State.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
New South Wales ..	256,755	248,615	274,791	183,856	160,393
Victoria..	208,240	212,011	223,555	161,010	123,797
Queensland	66,512	64,194	76,533	48,745	36,048
South Australia	45,015	46,114	52,588	35,327	25,233
Western Australia ..	37,605	35,358	37,797	23,934	17,291
Tasmania	15,589	16,066	15,214	7,382	3,370
Northern Territory ..	86	102	108	72	27
Total	629,802	622,460	680,586	460,326	366,159

(*g*) *War-Time Profits Tax.* This tax came into force on the 22nd September, 1917. It provides for a tax on the amount by which the profits made in the war-time financial year (1st July to 30th June following) exceeds the pre-war standard of profits, which may be either :—(*a*) the average profits of two of the three years before 4th August, 1917, or (*b*) 10 per cent. on the capital employed in the business. The tax in respect of profits derived in the financial year 1st July, 1915, to 30th June, 1916, was 50 per cent., and in all subsequent years 75 per cent. The collections for the last five years are given in the accompanying table. The original section 2 of the War Time Profits Tax Assessment Act stated that this Act would apply to the profits of any business arising up to 30th June next after the Declaration of Peace in connexion with the late war. After the signing of the armistice, on 11th November, 1918, the section was amended to accord with that intention, and thus fixed the final application of the Act to profits arising during the year ended 30th June, 1919. The figures for subsequent years represent delayed collections under this Act. Amendments of earlier assessments entailed the payment of refunds in each of the last five years.

COMMONWEALTH WAR-TIME PROFITS TAX COLLECTIONS, 1922–23 TO 1926–27.

State in which Collected.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
New South Wales ..	43,524	8,412	*Dr.* 78,079	9,642	56,698
Victoria (*a*)	168,255	*Dr.* 19,595	5,428	*Dr.* 18,547	*Dr.* 18,788
Queensland	70,402	33,767	*Dr.* 6,683	*Dr.* 35,553	*Dr.* 31,624
South Australia ..	*b Dr.* 15,302	42,944	*Dr.* 386	*Dr.* 32,337	*Dr.* 11,615
Western Australia ..	15,377	3,777	316	51	*Dr.* 16,258
Tasmania	4,501	1,341	4,621	*Dr.* 747	*Dr.* 6,770
Total	286,757	70,646	*Dr.* 74,783	*Dr.* 77,491	*Dr.* 28,357

(*a*) Including Central Office. (*b*) Including Northern Territory, £1,334.

(*h*) *War Postage.* This was a new source of revenue derived from an additional halfpenny rate imposed on postages from the 28th October, 1918. The amount credited to "War Postage" is the excess over the normal increase of revenue from postage. The amount collected for the balance of the financial year 1918–19 was £463,317, and in 1919–20 it was £745,962. In 1920–21 it fell to £197,928, as credits under this head of revenue ceased on 1st October, 1920.

(iii) *Public Works and Services.*—(*a*) *Postal Revenue.* Particulars concerning this branch of revenue for each of the financial years from 1922–23 to 1926–27 are contained in the following table :—

COMMONWEALTH POSTAL REVENUE, 1922–23 TO 1926–27.

Particulars.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
Private Boxes and bags ..	44,542	48,132	52,301	55,813	59,184
Commission— Money orders and postal notes	179,571	181,663	192,809	201,445	229.453
Telegraphs	1,405.664	1,426,542	1.481,784	1,490,480	1,488.156
Telephones	2,983.069	3.301,651	3,599,864	4,044,414	4,576.863
Postage	4,913,162	4,362,660	4,333,461	4,580,354	4,847,317
Radio Receipts	7,711	4,012	18,291	21,178	35,815
Miscellaneous	258,554	432,361	365,976	378,072	370,031
Total	9,792,273	9,757,021	10,044,486	10,771,756	11,606,819

The decrease of £550,502 in 1923–24 as compared with the preceding year under the sub-head "Postage" was due to reductions in postal rates. The installation of additional telephones was responsible for the large annual increases under the item "Telephones" during each of the past four years. The item "Miscellaneous" includes a subsidy from the Commonwealth Bank for the conduct of Savings Bank business, payments by the United Kingdom in respect of mail transit rates, and certain allowances.

(*b*) *Railway Revenue.* The Commonwealth Government is responsible for four lines—the Kalgoorlie–Port Augusta, the Port Augusta–Oodnadatta, the Darwin–Katherine River, and the Federal Capital Territory line. The appended table shows the amounts paid into the credit of the Consolidated Revenue Fund on account of each of these railways for the past five years. Under an arrangement which came into effect on 1st January, 1914, the Port Augusta–Oodnadatta Railway was worked by the South Australian Government, and the Commonwealth Government paid the deficiency on the working. This arrangement was terminated on 31st December, 1925, since when this railway has been worked by the Commonwealth Railway Commissioner. The Federal Capital Territory line was until 30th June, 1928, operated by the New South Wales Government on behalf of the Commonwealth Government, who receives profits accruing from the working of the line.

COMMONWEALTH RAILWAY REVENUE, 1922–23 TO 1926–27.

Railway.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
Kalgoorlie-Port Augusta ..	215,368	215,945	254,291	276,278	299,295
Port Augusta-Oodnadatta..	(*a*)	(*a*)	(*a*)	27,035	105,988
Darwin-Katherine River ..	14,768	16,461	29,105	38,879	62,202
Federal Capital Territory ..	(*b*)	(*b*)	3,641	7,576	10,249
Total	230,136	232,406	287,037	349,768	477,734

(*a*) See paragraph (*b*) above. (*b*) Not available.

Further detailed particulars are stated in Chapter VII., part B, Railways.

(*c*) *Commonwealth Steamships.* For the year 1926–27 the estimated earnings, including those of the detained enemy vessels, were £1,547,515, and the estimated expenditure, including Interest and Depreciation, £2,143,349, leaving a loss of £595,834 on the year's operations. Further information relative to the Commonwealth Government Line of Steamers will be found in Chapter VII., part A, Shipping.

(iv) *Other Sources of Revenue.*—(*a*) *Interest, Discount, etc.* The most important investments of the Commonwealth Government from which interest is derived are—Loans to States, General Trust Funds, Loans placed in London, Fixed Deposits with the Commonwealth and other Banks, and certain advances and overdrafts. In 1926–27 they included Interest on Loans and Advances to States, £2,626,474 ; Interest on General Trust Fund Investments, £283,091 ; and Interest, Nauru Island Agreement, £86,856.

(*b*) *Coinage.* The Commonwealth Revenue under this head is derived from profit on coin issued, and for 1926–27 was made up of £356,698 for silver and £16,373 for bronze.

(*c*) *Defence.* The income from this source (which is derived from both Defence and Navy Offices) arises chiefly from sales of material and stores supplied, forfeitures, fines, costs, etc. In 1926–27, £116,026 was contributed by the Defence Department (Military), £5,727 by the Air Services, and £30,740 by the Navy Office.

(*d*) *Patents, etc.* This heading includes Patents, Trade Marks, Copyright and Designs. In 1925–26, £31,236 was obtained from Patents, and £10,358 from Trade Marks, Copyright and Designs.

(*e*) *Defence Trust Account.* This is credited with receipts from Parliamentary appropriations, and from the Departments and the public for work done and material supplied. In the year 1924–25, only the unexpended balance of Trust Fund Clothing Factory, viz., £7,413, was transferred to the Consolidated Revenue Fund, thus closing the account.

(*f*) *Miscellaneous.* This includes several items which are either small in themselves, or not included under separate headings, as they are virtually non-recurring. Thus in 1922–23 there was a payment into revenue of £168,709 on account of Sugar—Interest on Overdraft; in 1923–24, a sum of £195,000 being a repayment of advances to Trust Fund—Cockatoo Island Dockyard Account; receipts under the Commerce Act amounted to £55,210 in 1924–25, £44,391 in 1925–26, and to £36,452 in 1926–27.

Division III.—Expenditure.

1. **Nature of Commonwealth Expenditure.**—The disbursements by the Commonwealth Government of the revenue collected by it fell naturally, under the "book-keeping"* system, into three classes, viz.:—

(*a*) Expenditure on transferred services.
(*b*) Expenditure on new services.
(*c*) Payment to States of surplus revenue.

Of these three, only the first two were actual expenditure, the last being merely a transfer, the actual expenditure being incurred by the States. In accordance with the provisions of the Constitution, the expenditure on transferred services was, under the "book-keeping" system, debited to the several States in respect of which such expenditure was incurred, while the expenditure on new services was distributed *per capita*. Surplus Commonwealth revenue was paid to the States monthly. During the earlier years of Federation, viz., until the end of the year 1903–4, new works, etc., for transferred departments were treated as transferred expenditure, and were charged to the States on whose behalf the expenditure had been incurred. In subsequent years all such expenditure was regarded as expenditure on new services, and distributed amongst the States *per capita*. Under the arrangement, which superseded the "book-keeping" system, a specific subsidy of 25s. per head of population was made annually by the Commonwealth to the States, and there was no further debiting of expenditure to the several States. The States Grants Act (No. 4 of 1927) provides for the abolition of the *per capita* payments as from 30th June, 1927. Further details in connexion therewith will be found in part B, § 3 of this chapter.

2. **Total Expenditure.**—The total expenditure by the Commonwealth Government and the expenditure per head of population during the period 1922–23 to 1926–27 are shown in the following table:—

COMMONWEALTH EXPENDITURE, 1922–23 TO 1926–27.

Particulars.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
Total	63,700,485	63,438,869	66,836,432	74,109,438	75,532,638
	£ s. d	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Per head	11 6 1	11 0 8	11 7 7	12 7 4	12 7 3

The foregoing statement, while including expenditure from Trust Funds, does not take into consideration payments into Special Trust Funds, or Special Debt redemptions from Revenue as follows:—1923–24, £4,915,755; 1924–25, £1,500,000; and 1925–26, £1,000,000. In 1923–24 £2,500,000 was allocated from Surplus Revenue for the purposes of Naval Construction and a Reserve for Defence. This amount also has not been included above in the expenditure for that year.

The largely increased expenditure in recent years is due partly to Old-age and Invalid Pensions, but mainly to the expenditure from Revenue upon War Services and to the general rise in prices.

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* For an exposition of the "book-keeping system" see Commonwealth Year Book No. 6, page 780.

3. **Details of Expenditure from Consolidated Revenue.**—(i) *General.* The following table gives details of the expenditure from Consolidated Revenue during the last five years. The amounts quoted for each Department represent the expenditure incurred on behalf of that Department :—

COMMONWEALTH EXPENDITURE—CONSOLIDATED REVENUE, 1922–23 TO 1926–27.

Heads of Expenditure.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
Cost of Departments—					
Governor-General	28,045	27,845	26,777	29,928	31,272
Parliament	446,464	336,012	355,257	469,419	537,634
Prime Minister	908,527	1,094,661	1,023,844	944,379	1,325,182
Attorney-General	162,797	162,136	169,015	185,427	198,511
Treasury	7,180,785	8,034,480	8,406,285	9,640,409	10,503,432
Trade and Customs	2,243,809	1,627,818	1,298,275	1,541,864	1,877,424
Defence	3,785,582	3,852,531	3,784,415	4,004,827	4,240,828
Postmaster-General	8,242,025	9,273,494	10,288,438	10,651,925	11,285,899
Home and Territories	526,033	522,640	524,983	699,756	777,291
Works and Railways	1,127,306	669,331	1,335,267	1,811,098	1,122,072
Health	155,912	167,917	187,799	176,672	206,679
Markets and Migration	..	..	869,717	685,714	117,391
Total	24,807,285	25,768,865	28,270,072	30,841,418	32,223,615
Miscellaneous—					
New Works	720,927	629,510	343,916	316,941	216,447
War Services	30,100,472	28,770,106	29,982,761	30,171,850	29,209,083
Subsidies to States	7,185,551	7,324,538	7,535,291	7,951,727	8,262,912
Interest—State Loans Act ..	886,250	945,850	1,216,253	2,084,757	2,623,852
Special Defence Provision ..	..	..	988,139	3,742,745	996,729
Federal Aid Roads ..	..	..	..	..	2,000,000
Total	38,893,200	37,670,004	40,066,360	44,268,020	43,309,023
Grand Total	63,700,485	63,438,869*a*	66,836,432*a*	74,109,438*a*	75,532,638

(*a*) Excluding Debt redemption ; 1923–24, £4,915,755 ; 1924–25, £1,500,000; and 1925–26, £1,000,000.

The amounts shown under the heading "Treasury" include payments from the Trust Fund on account of Pensions.

The items included under the above general heads are referred to in some detail in the succeeding sub-sections.

(ii) *Cost of Departments.*—(*a*) *Governor-General.* Section 30 of the Constitution enacts that, until the Commonwealth Parliament otherwise provides, there shall be payable out of the Consolidated Revenue Fund for the salary of the Governor-General an annual sum of ten thousand pounds, and a proviso is made that the salary of the Governor-General shall not be altered during his continuance in office. The total expenditure in connexion with the Governor-General and establishment for the five years 1922–23 to 1926–27 is as follows :—

EXPENDITURE.—GOVERNOR-GENERAL AND ESTABLISHMENT, 1922–23 TO 1926–27.

Details.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
Salary	10,000	10,000	10,000	10,000	10,000
Governor-General's Establishment ..	11,046	10,931	9,924	12,761	13,950
Contingencies (*a*)	6,999	6,914	6,061	6,314	6,469
Interest on Commonwealth Treasury Bills	..	..	792	853	853
Total	28,045	27,845	26,777	29,928	31,272

(*a*) Represents official services outside the Governor-General's personal interests, and carried out in the main at the instance of the Government.

(*b*) *Parliament.* Under this head have been grouped all the items of expenditure connected with the Parliamentary government of the Commonwealth for the five years 1922–23 to 1926–27.

EXPENDITURE.—COMMONWEALTH PARLIAMENT, 1922–23 TO 1926–27.

Details.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
Salaries of Ministers	14,598	13,569	14,408	15,300	15,300
Allowances to Senators	34,790	35,312	35,135	34,769	35,635
Allowances to Members of House of Representatives	65,275	74,359	74.628	66.055	74,190
Officers, staff, contingencies, etc. ..	61,484	61.418	60.353	64.089	71,837
Repairs, maintenance, etc.	1.800	1.894	2,284	2,281	1,832
Printing	23,108	24.244	24.323	28.182	24,623
Travelling expenses of Members and others	29,300	20,200	19,898	20.144	20,897
Insurance	342	342	342	342	45
Electoral Office	78,706	74,401	81,791	83.285	87,007
Election expenses	89.808	721	2,951	106.704	107.051
Administration of Electoral Act ..	44,703	25,576	32,437	41.568	43.702
Miscellaneous	2,550	3,976	6,707	6.700	55.515
Total	446,464	336,012	355,257	469,419	537,634

In section 66 of the Constitution, provision is made for payment out of the Consolidated Revenue Fund of the Commonwealth, for the salaries of Ministers of State, of an annual sum which, until Parliament otherwise provides, shall not exceed £12,000. This was modified in 1915–16, when the Minister of the Navy was given separate Cabinet rank. Allowances to senators and members of the House of Representatives are also provided for in the Constitution, section 48 of which specifies that until Parliament otherwise provides, each such allowance shall consist of £400 a year reckoned from the day on which the member takes his seat. During the second session of the Parliament in 1907 an Act was passed raising the annual allowance from £400 to £600, such increase to date from 1st July, 1907. In 1920, the salaries of members of both Houses were further increased to £1,000 per annum.

(c) *Prime Minister's Department.* This Department was created during the financial year 1911–12. In addition to the Prime Minister's Office it includes the Audit Office taken from the Treasury, the Executive Council taken from the External Affairs Department, the Public Service Commissioner's Office (now the Public Service Board's Office) taken from the Home Affairs Department, and Commonwealth Shipbuilding. In 1916–17 it assumed control of the High Commissioner's Office in London, which was detached from the old External Affairs Department when the latter was merged in the Home and Territories Department. It has recently enlarged its activities by administering the affairs of the Mandated Territory of Nauru, while the control of mail services to the Pacific Islands has been transferred to the Home and Territories Department. Immigration was administered until 1923–24, when it was transferred to the newly-created Markets and Migration Department. During 1926–27 the control reverted to the Prime Minister's Department. The expenditure for the last five years is shown in the following table :—

EXPENDITURE.—PRIME MINISTER'S DEPARTMENT, 1922–23 TO 1926–27.

Details.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
Salaries, contingencies, etc.	38,896	34,800	41.623	41.483	47.475
Audit Office	34,754	35,382	36,052	33,459	36.511
Rent, repairs, etc.	7,710	10,348	10,094	8.454	8.351
Public Service Board's Office ..	33,745	47,491	50,849	50,485	52 628
High Commissioner's Office, London ..	59,024	54,508	60,664	63.744	63.220
Australian Commissioner's Office, New York	6,466	11,489	14,875	12,270	12.966
Interest on Commonwealth Securities ..	439.054	464,071	530,006	548,709	688.244
Sinking Fund on Commonwealth Securities	31,013	48,967	48,177	48,179	53,792
Mail Service to Pacific Islands ..	46,805	52,953	(*a*)	(*a*)	(*a*)
Contribution to Secretariat, League of Nations	37,470	34,620	25,500	24,893	24.975
Immigration	69,560	66,866	(*a*)	(*a*)	*b* 108,746
Interest on Transferred Properties ..	30,370	29,480	29,945	29,965	29,967
Scientific and Industrial Research ..	..	..	(*b*)	(*b*)	11,803
Miscellaneous	73.660	203,686	176,059	82,738	186,504
Total	908,527	1.094,661	1,023.844	944,379	1,325,182

(*a*) Transferred to other Departments. (*b*) Transferred from other Departments.

The agreement with the Amalgamated Wireless Limited for the upkeep of Coastal Stations accounted for £47,330 of the " Miscellaneous " vote in 1922–23. In 1923–24 this item was debited with £137,697, payment to Central Wool Committee in respect of wool supplied for the local manufacture of wool-tops, and £14,109, British Empire Exhibition. In 1924–25, the largest item was a further payment of £137,697 to the Central Wool Committee. The largest items in 1925–26 were—Oil Agreement, £26,992, and American Fleet visit, £19,198. Included under " Miscellaneous " in 1926–27 was an expense of £95,462 in connexion with the Royal Visit and opening of Parliament at Canberra in May, 1927.

(*d*) *Attorney-General's Department.* The extra expenditure connected with this Department of late years has been caused in large measure by the extension of the Federal High Court, and an increase in the item " Patents, Trade Marks, etc." Details for the five years 1922–23 to 1926–27 are furnished hereunder :—

EXPENDITURE.—ATTORNEY-GENERAL'S DEPARTMENT, 1922–23 TO 1926–27.

Details.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
Attorney-General's Office	20,010	17,949	19,555	21,596	26,801
Crown Solicitor's Office	18,829	19,478	21,997	22,690	24,465
Salaries of Justices of High Court ..	21,500	21,500	21,500	21,500	21,500
High Court expenses	13,957	14,104	13,269	14,000	14,994
Court of Conciliation and Arbitration	11,182	8,378	11,995	12,958	23,162
Public Service Arbitrator's Office ..	3,604	3,955	4,027	3,953	4,220
Rent, repairs, etc.	12,797	11,081	11,472	12,571	12,039
Patents, Trade Marks, etc.	43,973	42,935	45,598	48,691	48,119
Investigation Branch	7,904	8,905	9,184	9,970	10,189
Miscellaneous	9,041	13,851	10,418	17,498	13,022
Total	162,797	162,136	169,015	185,427	198,511

(*e*) *Treasurer's Department.* The sub-departments under the control of the Commonwealth Treasurer are the Treasury, the Pensions Department, the Taxation Office, the Supply and Tender Board, and Superannuation. Details of the expenditure of this Department for the last five years are given in the following table :—

EXPENDITURE.—TREASURER'S DEPARTMENT, 1922–23 TO 1926–27.

Details.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
Treasury	50,698	51,007	54,413	51,808	52,585
Taxation Office	576,424	516,887	463,176	426,425	416,889
Pensions Office	84,535	88,405	92,999	97,761	114,446
Maternity Allowance Office	15,764	14,512	16,117	15,384	16,067
Coinage	31,979	16,273	23,836	54,905	45,968
Rent, repairs, etc. ..	29,426	22,993	13,085	15,305	10,209
Miscellaneous	(*b*)279,508	130,347	61,549	45,579	42,399
Departmental Expenditure	1,068,334	840,424	725,175	707,167	698,563
Invalid and Old-age Pensions (*a*)	5,337,936	6,426,752	6,896,401	8,146,636	9,034,938
Maternity Allowance ..	688,435	670,175	688,205	680,855	660,280
Maintenance of persons in charitable institutions ..	86,080	97,129	96,504	105,751	109,651
Total	7,180,785	8,034,480	8,406,285	9,640,409	10,503,432

(*a*) Including the following amounts spent from Trust Funds :—In 1922–23, £3,204,212 ; in 1923–24, £3,714,287 ; in 1924–25, £1,723,162 ; in 1925–26, £1,884,530 ; and in 1926–27, £285,897. (*b*) Including Taxation Officers' Compensation, £200,000.

The "Miscellaneous" vote for 1922–23 included a loan of £25,000 to the Returned Soldiers' Woollen Company and £200,000 Taxation Officers' Compensation. In 1923–24 it included £60,000, donation to Japanese Earthquake Fund, a loan of £21,000 to the Port Huon Fruit Growers' Association, and £10,000 to the Returned Soldiers' Woollen Company.

(*f*) *Trade and Customs.* Under this head have been included the expenditure of all the sub-departments under the control of the Minister of Trade and Customs, as well as the amounts payable as sugar and other bounties, and the expenses in connexion therewith. The administration of Patents, Trade Marks, and Copyright is now entrusted to the Attorney-General's Department, that of Quarantine to the Department of Health, and that of the Institute of Science and Industry to the Department of Markets and Migration. Particulars for the five years 1922-23 to 1926-27 are given in the following table :—

EXPENDITURE.—TRADE AND CUSTOMS DEPARTMENT, 1922-23 TO 1926-27.

Details.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
Chief Office	70,037	72,238	78,159	79,813	82,410
Customs (ordinary)	439,462	503,150	531,189	551,161	566,223
Navigation	25,426	39,927	44,484	44,726	44,872
Analyst	5,829	6,039	5,854	(*b*)	(*b*)
Audit (proportion)	9,371	10,970	10,552	11,030	12,487
Pensions and retiring allowances ..	20,528	25,863	33,283	34,091	35,145
Rents, repairs, etc.	21,445	22,616	32,191	26,148	19,102
Sugar and other bounties ..	192,114	455,859	304,548	498,582	781,347
Lighthouses	162,946	169,045	184,298	199,057	230,439
Interest on transferred properties ..	47,162	49,541	47,217	46,986	46,924
Interest on Commonwealth securities	4,943	8,180	13,667	21,224	22,507
Bureau of Commerce and Industry	4,659	3,484	..	..	..
Institute of Science and Industry ..	22,591	22,679	(*a*)	(*a*)	(*a*)
Miscellaneous	1,217,296	238,227	12,833	29,046	35,968
Total	2,243,809	1,627,818	1,298,275	1,541,864	1,877,424

(*a*) Transferred to Department of Markets and Migration. (*b*) Included in Customs (Ordinary).

The "Miscellaneous" vote in 1922–23 includes Loans for purchase of Wire Netting, £250,000, and Losses and Advances on Fruit Pools, £863,000. In 1923–24, an amount of £141,262, British Empire Exhibition, was included.

(*g*) *Defence.* The expenditure in connexion with Defence, which in 1901–02 amounted to £861,218, had by 1926–27 grown to £4,240,828, of which £1,593,308 was expended on Military Services, £2,212,715 on Naval Services, and £434,805 on Air Services. Expenditure on the Air Service was included for the first time in 1920–21. Particulars for the last five years are as follows :—

EXPENDITURE.—DEFENCE, COMMONWEALTH, 1922–23 TO 1926-27.

Details.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
Chief Office	89,732	96,645	103,438	103,913	109,475
Military	1,208,005	1,289,171	1,269,799	1,307,815	1,299,454
Naval	1,942,227	1,916,384	1,842,937	1,943,911	2,003,639
Air Services	169,203	211,978	205,002	254,882	381,982
Audit (proportion) ..	14,374	17,169	9,474	8,625	9,433
Pensions and retiring allowances	3,200	5,355	7,566	13,884	15,221
Rents, repairs, etc. ..	102,693	113,546	122,713	127,983	155,467
Interest on transferred properties	97,112	94,459	95,706	94,121	95,154
Interest on Commonwealth securities	84,756	79,823	100,162	123,028	142,705
Miscellaneous	74,280	28,001	27,618	26,665	28,298
Total	3,785,582	3,852,531	3,784,415	4,004,827	4,240,828

(*h*) *Postmaster-General's Department* Details of the expenditure of this Department for the last five years are given in the table hereunder :—

EXPENDITURE.—POSTAL DEPARTMENT, 1922–23 TO 1926–27.

Details.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
Chief Office	37,800	46,685	48,643	51,660	66,504
Postal Department (ordinary) ..	7,556,391	8,121,381	8,950,694	8,705,960	9,115.787
Audit (proportion)	10,293	10,663	10,630	10,009	10,359
Pensions and retiring allowances	84,057	92,436	95,928	102,518	110,429
Superannuation	7,748	28,999	45,687	59,136	75,563
Rents, repairs, etc.	123,405	138,092	174,012	195,464	199,119
Interest on transferred properties	193,103	198,699	198,923	(*a*)315,398	203,978
Interest on Commonwealth Securities	90,421	353,387	494,054	855,507	1,084,431
Sinking Fund on Commonwealth Securities	23,218	197,552	269,469	355,891	416,161
Miscellaneous	115,589	85,600	398	382	3,568
Total	8,242,025	9,273,494	10,288,438	10,651,925	11,285,899

(*a*) Includes £110,734 arrears of interest on value of Overland Telegraph Line, Adelaide to Darwin.

The "Miscellaneous" item for 1922–23 includes £47,330 for upkeep of coastal wireless stations ; for 1923–24, £59,560 for compensation of officers retired compulsorily.

(*i*) *Home and Territories.* Under this Department, created in the financial year 1916–17, is placed the bulk of the old External Affairs Department (after the removal of the London office), the Census and Statistics, Meteorological and Lands and Survey Offices, taken from the old Home Affairs Department, and the Mandated Territory of New Guinea. The Darwin–Katherine River Railway is administered by the Works and Railways Department. The Shipping and Mail Services to the Pacific Islands were transferred from the Prime Minister's Department in 1924–25, and the Lands and Survey branch to the Department of Works and Railways in 1925–26. The Electoral Office which is administered by this Department is for the purposes of this Chapter shown under Section (*b*) ante.

EXPENDITURE.—HOME AND TERRITORIES DEPARTMENT, 1922–23 TO 1926–27.

Details.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
Chief Office	21,141	24,544	27,891	27,369	48,328
Census and Statistics	20,438	19,575	23,394	26,240	27,620
Meteorological Branch ..	80,911	39,245	34,656	34,562	36,616
Lands and Survey	15,124	12,354	15,035	(*c*)	(*c*)
Papua	80,894	79,139	71,239	96,745	67,158
Northern Territory	195,886	212,469	145,685	147,120	126,582
Federal Capital Territory ..	..	..	..	..	43.485
Norfolk Island	3,500	3,500	3,500	3,945	4.339
New Guinea	..	..	10,064	10,214	11,077
Shipping and Mail Services, Pacific Islands	(*b*)	(*b*)	52,834	50,418	53,092
Interest on Commonwealth Securities (*a*)	46,843	68,226	75,226	88,209	99,825
Sinking Fund, Commonwealth Securities (*a*)	4,346	7,711	8,771	8,854	8.735
Rents, repairs, etc.	23,128	22,615	15,319	12,074	12 310
Miscellaneous	33,822	33,262	41,369	194,006	238.124
Total	526,033	522,640	524,983	699,756	777,291

(*a*) Includes Federal Capital Territory. (*b*) Included in Prime Minister's Department.
(*c*) Included in Department of Works and Railways.

The "Miscellaneous" in 1924–25 includes Census expenditure £11,999, and a grant of £10,000 for medical purposes in New Guinea. In each of the years 1925–26 and 1926–27 were included sums of £100,000 to aid prospecting.

(*j*) *Works and Railways Department.* The extension of Commonwealth Works and Railways led, in 1916–17, to the separation of these branches from the former Home Affairs Department and the constitution of a separate Works and Railways Department.

To this Department was entrusted the administration of the railways originally under the control of the old External Affairs Department and the Lands and Survey branch which was transferred to it from the Department of Home and Territories in 1925–26. The expenditure for the last five years was as follows :—

EXPENDITURE.—WORKS AND RAILWAYS DEPARTMENT, 1922–23 TO 1926–27.

Details.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
Chief Office	32,939	34,274	33,495	35,683	15.270
Kalgoorlie–Port Augusta Railway	249,289	265,293	285,912	285,876	271.398
Port Augusta–Oodnadatta Railway, and Northern Territory and Federal Capital Territory Railways	183,293	188,441	131,238	213,898	213,362
Lands and Survey	..	..	..	(a)13,952	17,143
Interest on transferred properties	..	..	..	1,654	2,067
Interest on Commonwealth Securities	127,717	135,085	332,266	425,737	519,252
Sinking Fund on Commonwealth Securities	16,178	15,007	37,713	45,283	57.511
Rent, repairs, etc.	5,526	4,928	7,648	7,939	9,629
Royal Commission—Unification of Gauge	449	560	..	..	..
Main Roads Development ..	500,000	..	500,000	750.000	..
Miscellaneous	11,915	25.743	6,995	31.076	16,440
Total	1,127,306	669,331	1,335,267	1,811,098	1,122,072

(a) Previously included in Department of Home and Territories.

(k) *Health Department.* This department came into existence in the financial year 1921–22. Details of expenditure are as follow :—

EXPENDITURE.—HEALTH DEPARTMENT, 1922–23 TO 1926–27.

Details.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
Central Administration ..	8,486	9,898	12,432	13,543	18.488
Salaries, Contingencies, etc. ..	114,429	106,298	116,291	121.588	142 447
Interest on Treasury Bills ..	965	1,804	2,083	3.128	3,359
Interest on Transferred Properties	7,979	7,466	7,674	7.668	8.356
Rent and repairs	14.858	15.292	12,697	20.670	27.404
Miscellaneous	9.195	27.159	36,622	10,075	6,625
Total	155,912	167,917	187,799	176,672	206,679

Included under the item Miscellaneous in 1924–25 is an expenditure of £22,488 in connexion with the rinderpest outbreak in Western Australia.

(l) *Markets and Migration Department.* This department, which was formed in the financial year 1924–25, took over various functions previously performed by other departments. Details of expenditure are as follow :—

EXPENDITURE.—MARKETS AND MIGRATION DEPARTMENT,(a) 1924–25 TO 1926–27.

Details.	1924–25.	1925–26.	1926–27.
	£	£	£
Chief Office	1,529	9,989	12,871
Immigration	63,058	93,588	..
Commonwealth Council for Scientific and Industrial Research	24,796	32,574	..
British Empire Exhibition	13,567	21,133	..
Loan to State of Tasmania for Relief of Apple Growers	..	..	25,000
Dried Fruits Export Control	19,072	29,229	30,791
Dairy Produce Export Control	..	26,728	20,664
Fruit Pool Losses	154,000	..	..
Assistance to Primary Production ..	500,000	..	..
Interest on Commonwealth Securities ..	30,325	95,780	11,558
Miscellaneous	63,370	376,693	16,507
Total	869,717	685,714	117,391

(a) Name subsequently changed to Department of Markets.

The item "Miscellaneous" includes in 1925–26 Scientific and Industrial Investigations, £250,000, and Science and Industry Endowment, £100,000.

(iii) *Miscellaneous.* (*a*) *New Works.* Particulars of the expenditure on new works, etc., during the last five years are given in the following table :—

EXPENDITURE ON NEW WORKS, 1922–23 TO 1926–27.

Department.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
Parliament	..	..	..	..	..
Prime Minister	143	31,250	..	5,844	..
Treasury	..	..	..	..	..
Attorney-General ..	..	..	..	3,251	..
Trade and Customs ..	3,609	1,675	7,887	714	837
Defence	460,734	311,323	309,277	247,398	177,992
Postmaster-General ..	221,709	248,876	..	..	..
Home and Territories ..	13,885	15,282	16,613	33,629	22,697
Works and Railways ..	..	..	..	17,677	11,801
Health	20,847	21,104	10,139	8,018	3,078
Markets and Migration ..	..	..	..	410	42
Total	720,927	629,510	343,916	316,941	216,447

(*b*) *War Services.* Full details concerning the expenditure from Consolidated Revenue upon War and Repatriation will be found in a later sub-section.

(*c*) *Interest—State Loans Act.* The amount of £2,623,852 is the interest on the sum of £58,858,864 borrowed by the Commonwealth and advanced to the States.

Division IV.—Subsidy Paid to States.

1. Payments to the States.—The following table furnishes particulars of the subsidies paid to the States on account of each of the financial years 1922–23 to 1926–27 :—

COMMONWEALTH SUBSIDY PAID TO STATES, 1922–23 TO 1926–27.

State.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
New South Wales ..	2.690,198	2,738,725	2,796,928	2,853,850	2.917,411
Victoria..	1,969,772	2.014,746	2,055,834	2,090,951	2 127,159
Queensland	978,673	1,005,486	1,035.791	1,069,286	1,096.235
South Australia	635,833	650,453	668,084	684,932	703,816
Western Australia ..	554,828	558,573	561,741	(*b*)915,231	(*b*)773.432
Tasmania	356,247	356,555	(*a*)416,913	(*c*)337,477	(*c*)644,859
Total	7,185,551	7,324,538	7,535,291	7,951,727	8,262,912

(*a*) Including a special payment of £61,656 income tax received by the Commonwealth in respect of prizes won on lotteries and paid to the State under Section 4 of the Tasmania Grant Act 1924. (*b*) Including special grants of £353,112 (1925–26), and £212,793 (1926–27). (*c*) Includes special grants of £68,000 (1925–26) and £378,000 (1926–27).

The amounts of subsidy given in the table are based upon an annual payment of £1 5s. per capita, with special concessions to Western Australia and Tasmania, and are in accordance with the provisions of the "Commonwealth Surplus Revenue Act" passed in 1910 which came into effect on the 1st July of that year for a period of ten years, subject to revision on the expiration thereof. This period expired on the 30th June, 1920, and it was then possible for Parliament to extend the Act for a further period, or to enter into new financial relations with the States. The "per capita" payment has been continued provisionally up to the present time. A Conference of Commonwealth and State Ministers was held in May, 1926, to consider the question of the inter-relation of Commonwealth and State finance. No satisfactory conclusions were arrived at, but the Commonwealth Government has since passed legislation terminating these payments at 30th June, 1927. See further Section B § 1, 3, hereinafter.

Division V.—Surplus Revenue.

1. **Surplus Revenue.**—Until the end of 1906–7, the balance of the Consolidated Revenue Fund was paid to the States. From 1907–8, until the abolition of the book-keeping provisions of the Constitution, the States received only three-fourths of the net Customs and Excise Revenue, and the balance of the Consolidated Revenue Fund was transferred to the Invalid and Old-age Pensions Trust Account and the Naval Defence Trust Account to provide for expenditure in subsequent years. A statement of surpluses and deficiencies for the past five years is appended hereto.

COMMONWEALTH SURPLUS REVENUE, 1922–23 TO 1926–27.

Year.	Surplus.	Deficiency.	Accumulated Surplus at end of Year.
	£	£	£
1922–23	1,020,150	..	7,428,574
1923–24	..	4,837,421	2,591,153
1924–25	518,376	..	3,109,529
1925–26	..	2,823,632	285,897
1926–27	2,635,597	..	2,921,494

The ordinary transactions of the year 1923–24 resulted in a surplus of £2,578,334, which, with the surplus brought forward, made an accumulated surplus of £10,006,908. Of this amount, £4,915,755 was applied to debt redemption, and £2,500,000 to provide for Naval Construction and a Reserve for Defence.

§ 3. Trust Funds.

1. **Trust Accounts.**—The Trust Fund balances on 30th June, 1927, totalled £14,559,994 as compared with £14,410,826 for the corresponding date in the year ending 30th June, 1926. Details concerning the most important trust accounts are contained in the following table :—

COMMONWEALTH TRUST FUNDS AT 30th JUNE, 1927.

Trust Accounts.	Balance at 30th June, 1927.	Trust Accounts.	Balance at 30th June, 1927.
	£		£
Admiralty	58,820	New Guinea Agency	4,350
Australian Soldiers' Repatriation ..	32,649	Northern Territory	33,268
Australian Soldiers' Repatriation Contribution	197,494	Other Trust Moneys	1,149,979
Canned Fruit Bounty	4,161	Primary Production	398,634
Cockatoo Island Dockyard ..	24,036	Prospecting for Precious Metals ..	36,498
Commonwealth Government Ships ..	9,955	Prospecting for Petroleum	128,070
Defence—Clothing Material	18,185	Public Trustee	16,877
Naval Construction ..	1,290,800	Railway Plant and Stores Suspense ..	76,049
Reserve	171,570	Railway Provision Stores	1,118
Small Arms	19,761	Science and Industry Investigations	216,708
Small Arms Ammunition ..	153,427	Stamp Printing	10,794
Stores, London Liabilities ..	1,292,521	State Loans Expenses Suspense ..	295
Deferred Pay	501,502	Superannuation Fund	1,501,840
Federal Aid Roads	1,346,940	Suspense	*Dr.* 1,623
General Average Deposits	12,243	Taxation Officers Compensation ..	164,101
Imperial Pensions	34,716	Treaty of Peace—Clearing Office Account	10,716
International Postal and Money Order	38,678	Unclaimed Militia Pay	819
Invalid and Old-age Pensions ..	1,421,493	Victorian Parliament House Memorial	50,000
Loans—Wire Netting	4,982	War Savings Certificates Interest ..	146,113
London Loans Expense Suspense ..	31,840	War Service Homes Insurance ..	107,848
Main Roads Development	68,771	Wire and Wire Netting	250,000
Money Order	493,500	Miscellaneous	1,472,302
National Debt Sinking Fund ..	1,562,854	Total	14,559,994

§ 4. Commonwealth Loan Funds and Public Debt.

1. **General.**—Although it was not until 1915 that the Federal Government came into the loan market as a borrower, there had previously existed a Commonwealth Public Debt which included several items, such as the balance of the debt taken over from South Australia and the money owing to the States for transferred properties. The debt still includes the items mentioned, in addition to the General Loan Fund, the loans for military purposes, etc. In view of the large expansion of the Public Debt, and its present importance in Commonwealth public finance, the different items are treated seriatim in the following sub-sections :—

2. **Loans taken over from South Australia.**—The first portions of the debt were contracted at the beginning of 1911, when the Commonwealth assumed responsibility for the payment of interest on transferred properties (further dealt with in sub-section 4) and for the administration and the liabilities of the Northern Territory and the Port Augusta–Oodnadatta Railway. At 30th June, 1911, the debt on account of the former was £3,657,836, and on account of the latter, £2,274,486—a total of £5,932,322. As the securities fall in they are redeemed by the Commonwealth Government, the money required being taken from the Loan Fund. The item is thus constantly diminishing, and on 30th June, 1927, stood at £2,103,157, of which £1,117,619 was on account of the Northern Territory, and £985,538 on account of the railway.

3. **Loan Fund for Public Works Redemptions, etc.**—Up to the year 1911 the Commonwealth Government had met its Public Works expenditure out of revenue. In that year, however, in view of the heavy prospective cost of the Transcontinental Railway and the Federal Capital Territory, it was decided to institute a Loan Fund similar to those of the States. The initiation of this Fund was greatly assisted by the fact that the Treasury at that time held a large quantity of gold, principally on behalf of the Australian Notes Account. Up to 30th June, 1914, the money required for loan expenditure was obtained mainly from this source at 3½ per cent., and inscribed stock of an equivalent value was created. Since the outbreak of war, the money required for the Loan Fund has been mainly obtained by the issue of Treasury Bills and other securities issued in London and New York as well as in Australia. The details of the expenditure for the last five years and the total expenditure to 30th June, 1927, are given in the following table :—

COMMONWEALTH LOAN EXPENDITURE FOR WORKS, 1922 TO 1927 AND TOTAL.

Particulars.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.	Total to 30/6/1927
	£	£	£	£	£	£
Railway Construction—						
Trans-Australian Railway ..	82,500	62,506	52,113	69,565	88,198	6,463,978
Northern Territory ..	7,651	20,420	50,535	195,123	398,764	1,071,586
Grafton—South Brisbane Railway	..	..	..	840,000	1,000,000	1,840,000
Other	12,997	33,355	211,074	91,489	420,385	817,975
Papua—Railways and Wharves	47,720	..	..	..	..	111,556
Posts and Telegraphs—						
Purchase of land ..	138,875	47,348	41,330	33,179	49,901	542,601
Construction of conduits, etc.	2,059,523	3,855,673	4,495,662	5,505,454	3,895,424	22,022,730
Aoquisition of land (*a*)—						
London	6,021	4,395	..	500	..	880,190
Perth	90,239	..	..	..	..	152,205
Federal Capital Territory ..	354,041	499,349	296,061	..	..	2,014,697
Elsewhere (*b*)	4,968	19,220	24,396	5,750	14,102	230,923
Defence Machinery ; Dockyards, Cockatoo Island ; Naval Bases, etc.	43,566	66,089	56,807	78,027	153,901	1,680,433
Ship Construction	1,815,713	626,646	312,952	..	..	9,329,457
General Arsenal ; Small Arms etc. ; Cordite	27,525	91,796	219,271	67,720	70,873	983,318
Royal Australian Air Force —Construction of Buildings ..	..	..	..	126,000	139,819	265,819
Lighthouses	10,400	26,285	18,155	67,359	15,481	166,016
Contribution under River Murray Waters Act	176,921	235,609	192,500	205,000	209,500	1,283,625
Wireless Telegraphy	..	62,500	62,500	79,560	50,000	284,295
Immigration	199,483	203,744	181,193	262,589	248,104	1,228,962
Construction of Roads ..	217,944	31,788	..	..	..	249,686
Subscription to Capital of Oil Refining Company ..	50,000	100,000	93,750	..	..	343,751
Miscellaneous	36,962	82,175	33,459	51,541	296,676	1,856,055
Total	5,383,949	6,068,808	6,341,758	7,678,856	7,051,128	53,819,888
Repayment of Loans ..	4,243,135	28,090,116	8,276,829	22,011,103	2,995,612	73,413,571

(*a*) Including cost of erection of buildings. (*b*) Excluding purchases for Posts and Telegraphs.

4. Properties Transferred from States.—At the time of Federation, when the Commonwealth took over the control of a great many departments which had previously been administered by the States, a large amount of property was handed over to the Commonwealth Government. A valuation was made, with results set out in detail in Official Year Book No. 14, page 694, and the Commonwealth now pays interest at the rate of 3½ per cent. to the States on account of all the transferred properties.

Since the valuation mentioned, some transfers and retransfers have been made. The estimated value of the transferred properties for the last five years is given in the table in sub-para. 8—i. and ii. hereinafter.

5. War Loan from the Imperial Government.—On the outbreak of the European war in 1914, the Commonwealth Government obtained a loan from the Imperial Government for the purpose of financing the prospective large military expenditure. At first, the arrangement was that the Imperial Government should advance the sum of £18,000,000. Subsequently further loans totalling £31,500,000 were negotiated. In addition to this capital indebtedness of £49,500,000, a further sum of £42,696,500 was due to the British Government for the maintenance of Australian troops.

Early in 1921 an arrangement was concluded with the Imperial Government, by means of which almost the entire debt (upwards of £92,000,000) was consolidated. The Commonwealth Government undertook to extinguish the debt by annual payments of approximately £5,550,000, spread over about 35 years, the payment representing 6 per cent. on the original debt. This provides for interest at nearly 5 per cent., and a sinking fund of a little more than 1 per cent., and may be regarded as a very satisfactory arrangement for the Commonwealth, since it entails only a moderate rate of interest, and provides for the ultimate extinction of nearly one-fourth of the National War Debt. The amount outstanding on 30th June, 1927, was £85,572,848, which will diminish steadily year by year owing to the operation of the sinking fund.

6. Flotation of War Loans in Australia.—In addition to the advances from the Imperial Government, the Commonwealth Government raised large amounts of money in Australia. Full details of the seven War Loans are given in Official Year Book No. 14.

7. Flotation of Loans, 1926-27.—During the year 1926–27, the six loans raised by the Commonwealth amounted to a total of £53,266,540, of which £31,737,440 was for Commonwealth purposes and £21,529,100 for the States.

COMMONWEALTH LOANS FLOATED, 1926–27.

For whom raised.		Amount Raised.			Rate of Interest.	Date of Maturity.	Price.
		London.	Australia.	Total.			
		£	£	£	%		£
Commonwealth ..	£1,199,130	..	2,985,430	2,985,430	5½	15.2.33	100
States	5,316,000	..	1,451,750	1,451,750		15.2.38	
		..	2,077,950	2,077,950		15.2.43	
Conversion	..	..	9,967,470	9,967,470	5½	15.2.33	100
		..	5,042,260	5,042,260		15.2.38	
		..	10,038,260	10,038,260		15.2.43	
Commonwealth ..	826,110	..	2,559,450	2,559,450	5½	15.2.33	100
States	3,463,000	..	751,520	751,520		15.2.38	
		..	978,140	978,140		15.2.43	
Conversion	..	..	1,605,570	1,605,570	5½	15.2.33	100
		..	878,400	878,400		15.2.38	
Redemption	..	..	848,900	848,900		15.2.43	
		..	375,000	375,000	4	1.8.27	100
		..	956,340	956,340		30.11.27	
Redemption and Conversion (States)		11,711,000	..	11,711,000	5	1.7.45–75	98
		..	1,039,100	1,039,100	5½	15.2.43	100
Total		11,711,000	41,555,540	53,266,540	..	..	..

8. Commonwealth Public Debt.—(i) *Total Debt.* Separate consideration has already been given to the items composing the Public Debt. The table appended shows the debt of the Commonwealth (apart from the States) at yearly intervals since 1923.

COMMONWEALTH PUBLIC DEBT AS AT 30th JUNE, 1923 TO 1927.

Details.	1923.	1924.	1925.	1926.	1927.
	£	£	£	£	£
Balance of loans taken over from South Australia—					
(*a*) On account of Northern Territory	2,209,169	2,208,719	1,192,419	1,117,619	1,117,619
(*b*) On account of Oodnadatta railway	1,693,745	1,670,432	1,077,678	1,075,876	985,538
Value of properties transferred by States	11,042,987	10,860,591	10,858,093	11,065,129	11,035,547
Inscribed Stock and Bonds	23,764,716	36,227,255	42,527,255	57,759,097	55,112,852
Treasury Bills	2,843,125	5,021,545	7,247,505	4,202,583	5,503,340
War Loan from British Government ..	90,388,604	89,270,922	88,097,605	86,865,883	85,572,848
Commonwealth Internal Loans ..	241,746,090	249,751,997	245,623,618	247,691,398	242,386,982
Loans raised on behalf of States ..	16,750,000	17,787,461	32,997,311	47,727,060	58,608,168
Gratuities	19,508,481	700,900	64,452	32,370	25,966
Miscellaneous	1,049,399	2,100,277	1,262,126	906,336	718,882
Total	410,996,316	415,600,099	430,948,062	458,443,351	461,067,742
Commonwealth Debt *per capita* ..	£72 5 2	£71 12 3	£72 13 7	£75 17 0	£74 15 2

(ii) *Place of Flotation.* The loans taken over from South Australia, which constituted the first portion of the Federal Public Debt, included both London and Australian securities. The presence in the Treasury of a large holding of gold, and the moderate rate of interest ruling on gilt-edged securities, made the conditions in 1911 and for some little time afterwards very favourable for the flotation of local loans. London securities were redeemed as they fell due, and replaced by the 3½ per cent. stock of the Loan Fund. Consequently, up to 1914 the amount of the securities repayable in London fell steadily, and the amount repayable in Australia rose rapidly. In 1915 the military loan from the Imperial Government caused a sharp rise in the amount of the securities repayable in London, which was maintained in the two following years. This was, however, more than offset by the flotation of the local war loans. In 1925–26 a loan of £15,411,487 was raised in New York. The appended table gives particulars of Commonwealth loans outstanding in each of the last five years which had been floated in London, New York, and Australia respectively. A separate column is devoted to the cost of the transferred properties which, for obvious reasons, it is impossible to allocate. The percentage of loans floated in each centre is also given and shows that approximately one-third of loan moneys has been obtained abroad and the remaining two-thirds has been raised locally.

COMMONWEALTH PUBLIC DEBT.—PLACE OF FLOTATION, 1923 TO 1927.

At 30th June.	Payable—				Value of Transferred Properties.		Total.
	Abroad.		In Australia.				
	Amount.	Percentage on Total Debt.	Amount.	Percentage on Total Debt.	Amount.	Percentage on Total Debt.	
	£	%	£	%	£	%	£
1923..	126,165,389	30.70	273,787,939	66.61	11,042,988	2.69	410,996,316
1924..	142,524,394	34.29	262,215,114	63.09	10,860,591	2.62	415,600,099
1925..	146,117,023	33.91	273,972,946	63.57	10,858,093	2.52	430,948,062
1926..	(*a*) 171,294,986	37.36	276,083,236	60.22	11,065,129	2.42	458,443,351
1927..	(*a*) 168,218 789	36.49	281,813,406	61.12	11,035,547	2.39	461,067,742

(*a*) Including, for 1925–26, £15,411,487 (3.36 per cent.), and for 1926–27, £15,365,663 (3.33 per cent.), payable in New York.

(iii) *Amount of Debt at Various Rates of Interest.* When the first debt was taken over from South Australia, it consisted mainly of securities bearing interest varying from 3 per cent. to 4 per cent., the average rate of interest for the first year being £3 12s. 4d. For the first three years the increase in the debt was due almost entirely to the expansion of the 3½ per cent. stock of the Loan Fund, consequently the average rate of interest fell steadily, until on 30th June, 1914, it stood at £3 11s. 10d. Then came the loans for military and repatriation purposes, and the fall in the average rate was ultimately converted into a rise which was steadily maintained until at 30th June, 1927, the average rate stood at £5 4s. 7d.

The accompanying table gives particulars of rates of interest for the five financial years ended 30th June, 1927 :—

COMMONWEALTH PUBLIC DEBT.—RATES OF INTEREST, 1923 TO 1927.

Rates of Interest.	At 30th June—				
	1923.	1924.	1925.	1926.	1927.
%	£	£	£	£	£
3	35,063	35,063	35,063	33,261	..
3½	14,976,377	14,793,980	14,791,482	14,998,518	3,933,389
£3/12/3 ..	655,153	631,840	576,288	576,288	485,949
3¾	833,745	833,295	833,295	758,495	758,495
3⅞	..	..	375,000	..	..
4	9,053,405	5,504,903	5,504,903	4,484,361	5,785,118
4½	120,835,510	116,908,700	113,520,010	46,600,260	29,783,480
4⅝	..	..	..	..	375,000
4¾	..	..	6,000,000	6,000,000	6,000,000
£4/18/4 ..	90,388,604	89,270,922	88,097,605	86,865,883	85,572,848
5	67,298,328	82,400,498	81,125,491	103,243,689	112,362,689
5¼	19,508,481	700,900	..	8,614,820	49,386,660
5½	12,750,000	12,750,000	12,750,000	80,109,440	67,333,780
6	74,661,650	91,578,657	107,218,818	105,890,122	98,920,556
Overdue ..	..	191,341	120,107	268,214	369,778
Total ..	410,996,316	415,600,099	430,948,062	458,443,351	461,067,742
Average rate of interest ..	£4/19/3	£5/0/1	£5/0/10	£5/3/11	£5/4/7

(iv) *Amount of Interest Payable.* A table is appended showing the amounts payable as interest on the Commonwealth Public Debt as at 30th June in the years 1923 to 1927 inclusive. The rapid increase is due not only to the great expansion of the Loan Fund, but also to the high rate of interest on recent loans.

COMMONWEALTH PUBLIC DEBT.—INTEREST PAYABLE IN LONDON, NEW YORK AND AUSTRALIA, AT 30th JUNE, 1923 TO 1927.

30th June—	Payable in—				Total.
	London.	New York.	Australia.		
			Loans.	Transferred Properties.	
	£	£	£	£	£
1923 ..	6,413,668	..	13,591,968	386,505	20,392,141
1924 ..	7,289,787	..	13,131,877	380,121	20,801,785
1925 ..	7,454,001	..	13,943,932	380,033	21,777,966
1926 ..	7,949,761	770,575	14,719,956	387,280	23,827,572
1927 ..	7,689,240	768,283	15,106,231	551,777	24,115,531

(v) *Dates of Maturity.* The dates of maturity of the several portions of the Commonwealth debt are shown hereunder. The Commonwealth Government has refrained from issuing interminable stock, although as regards about 3 per cent. of the debt no definite date of maturity had been assigned on 30th June, 1927. It will be noticed that about £140,000,000 falls due in the space of four years 1927 to 1930, the bulk of this being represented by the balance of the first eight internal loans. While the actual dates of maturity extend from 1927 to 1975, or a period of 48 years, the average period till maturity is only 11.47 years.

COMMONWEALTH PUBLIC DEBT.—DUE DATES OF AMOUNTS OUTSTANDING ON 30th JUNE, 1927. (*a*)

Due Dates.	Amounts.	Due Dates.	Amounts.
	£		£
1927	44,472,297	1945	22,384,000
1928	21,105,630	1948	10,058,030
1929	2,806,454	1955	15,365,663
1930	73,419,130	1960	6,000,000
1931	29,384,250	1972	3,764,716
1933	17,146,777	1975	22,219,000
1934	3,861,322	Overdue	369,778
1935	4,630,941	Indefinite	1,078,479
1936	14,754,006	Annual Repayments ..	85,572,848
1937	1,200	Transferred Properties ..	11,035,547
1938	8,132,306		
1939	151,448	Total	461,067,742
1941	48,077,610		
1943	15,276,310	Average period to maturity	11.47 years

(*a*) Those loans in the case of which the Government has the option of redemption during a specified period have been in each case classified according to the latest date of maturity.

9. **Flotations on behalf of States.**—Act No. 17 of 1916 authorized the Treasurer to borrow £8,940,000 in the United Kingdom, and Act No. 16 of 1917 to raise £8,000,000, also to lend the amount to the several States, other than New South Wales, and, pending the borrowing of the money, to advance the amounts set forth in the Acts out of loans made by the Government of the United Kingdom to the Commonwealth. In pursuance of these Acts, £16,907,287 was distributed to the States up to 30th June, 1924. Other loans have since been floated in London, New York and Australia. The totals so raised have been distributed as shown in the following table :—

COMMONWEALTH LOANS RAISED ON BEHALF OF STATES AS AT 30th JUNE, 1927.

State.	Amount Floated in—			Total.
	London.	New York.	Australia.	
	£	£	£	£
New South Wales	605,864	..	2,981,850	3,587,714
Victoria	2,801,706	1,926,436	8,639,350	13,367,492
Queensland	5,650,408	770,574	5,647,860	12,068,842
South Australia	4,117,512	770,574	11,263,310	16,151,396
Western Australia	6,736,011	1,541,149	3,325,210	11,602,370
Tasmania	996,300	..	1,084,750	2,081,050
Total ..	20,907,801	5,008,733	32,942,330	58,858,864

In addition to these amounts, the Commonwealth Government has made further advances to the States for various purposes which are set out as follows, the figures representing sums outstanding at 30th June, 1927 :—

ADVANCES TO STATES OUTSTANDING ON 30th JUNE, 1927.

Advances for—	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Total.
	£	£	£	£	£	£	£
Settling returned soldiers	9,805,983	11,794,075	2,700,583	2,833,005	5,431,202	2,129,563	34,694,411
Providing employment	..	86,702	400,000	28,796	..	..	515,498
Public Works, Redemption, etc.	2,981,850	13,065,488	13,092,504	16,260,333	9,816,085	2,127,187	57,343,447
Grafton–South Brisbane Railway	605,864	..	226,339	..	..	..	832,203
Silos for wheat storage	500,000	..	..	..	..	..	500,000
Immigration.. ..	..	1,092,004	..	..	2,288,584	..	3,380,588
Other purposes ..	..	15,500	138,158	..	..	25,000	178,658
Gross Total ..	13,893,697	26,053,769	16,557,584	19,122,134	17,535,871	4,281,750	97,444,805
Sinking Fund contributions and accrued interest	55,428	51,366	23,809	68,895	46,830	4,366	250,694
Net amount outstanding	13,838,269	26,002,403	16,533,775	19,053,239	17,489,041	4,277,384	97,194,111

10. Sinking Fund. (i) *To 1923.* At an early stage of its public debt experience the Commonwealth Government established a sinking fund against most of the securities which constitute its public debt. Part of the inscribed stock issued for works purposes carried a sinking fund of 5 per cent., and the remainder one of ½ per cent. The internal issues carried sinking funds, partly of ½ per cent., and partly of 1 per cent. The War Savings Certificates carried a sinking fund of ½ per cent., and the Northern Territory and Port Augusta–Oodnadatta Railway loans one of ¼ per cent. These sinking funds were invested partly in Treasury Bills, partly in Commonwealth Inscribed Stock, and partly in Bonds (War Issues).

(ii) *National Debt Sinking Fund.* This fund was created by virtue of the National Debt Sinking Fund Act 1923, No. 5 of 1923, which was assented to on the 11th August, 1923. Provision is made therein for the merging of the Loans Sinking Fund, the Northern Territory Sinking Fund, and the Port Augusta Railway Sinking Fund into the National Debt Sinking Fund, the Loans Sinking Fund Act of 1918 being repealed. This Act also provides for the payment annually to the Fund of the sum of £1,250,000, for the payment thereto of a sum equal to 10 shillings per cent. of the net debt created, also a sum equal to £5 per cent. of debt redeemed and cancelled by the Commission in pursuance of the Act. In addition, there is to be paid to the Fund repayments of advances from Loan Fund made to States and to Territories under the authority of the Commonwealth ; of advances for the erection of wheat silos ; of advances under the Nauru Island agreement ; of advances for such purposes as are prescribed ; of purchase money and repayments of advances under the War Service Homes Act ; and unexpended balances of the Loan Fund. The provision as to payment of £5 per cent. to the Fund does not, however, apply to these repayments, purchase money, and unexpended balances. The Fund also benefits by half the net profits derived by the Commonwealth Bank of Australia on or after the first day of July, 1923, in place of the payment hitherto made to the Bank Redemption Fund.

The Act was amended in 1924 to provide for additional payments being made to the Fund in respect of expenditure from the Loan Fund by the Postmaster-General's Department.

Further amendments made by the National Debt Sinking Fund Act 1925, provide that reparation moneys received under the Treaty of Peace with Germany, and Sinking Fund contributions received from the States in respect of loans raised for them by the Commonwealth, shall be paid into the National Debt Sinking Fund.

The National Debt Commission was created for the purpose of taking general control of all Sinking Fund moneys, and of deciding when and how these moneys shall be invested or used for the redemption of the debt. The situation of the Sinking Funds, as at 30th June, 1923, is set out in the accompanying table :—

COMMONWEALTH PUBLIC DEBT.—SINKING FUNDS, 1919 TO 1923.

At 30th June—	Total Accumulation to date.	Total Securities Cancelled to date.	Balance Available.
	£	£	£
1919 ..	3,740,824	1,636,621	2,104,203
1920 ..	5,139,281	2,969,980	2,169,301
1921 ..	8,391,349	7,386,822	1,004,527
1922 ..	10,292,881	9,335,129	957,752
1923 ..	11,756,992	9,606,739	2,150,253

The old Sinking Funds were merged in the National Debt Sinking Fund on 11th August, 1923. Particulars of receipts and expenditure are as follows :—

COMMONWEALTH PUBLIC DEBT.—NATIONAL DEBT SINKING FUND, 1923–24 TO 1926–27.

Items.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£
Cr. Brought forward	..	2,059,372	4,152,992	3,269,249
Balance transferred to fund on 11th August, 1923	2,262,982	..	..	..
From Consolidated Revenue ..	1,430,141	3,111,216	2,796,722	2,017,391
Repayments of Sundry Loans ..	513,073	16,482	33,157	18,171
Purchase Money and Repayments under War Service Homes Act ..	675,174	746,012	744,548	831,562
Half net Profit Commonwealth Bank	61,673	130,477	226,176	236,280
Reparation Moneys	..	257,692	302,922	1,340,573
Interest on Investments	117,926	94,271	83,950	89,754
Contributions by States	..	..	76,711	162,464
Total	5,060,969	6,415,522	8,417,178	7,965,444
Dr. Redemptions	3,001,597	2,262,530	5,147,929	6,402,590
Carried Forward	2,059,372	4,152,992	3,269,249	1,562,854
Total	5,060,969	6,415,522	8,417,178	7,965,444

The Imperial Government loan comes in a different category from the others, since it is being liquidated by the funding arrangement described in detail on a previous page.

§ 5. Cost of War and Repatriation.

1. **General.**—In view of the importance of the subject, a further reference is here made to the cost of the war. The general policy of the Commonwealth Government has been to pay from Consolidated Revenue all recurring charges for interest, sinking fund, pensions, and other charges consequent upon the war, and part of the expense of repatriation. On the other hand, the whole direct cost of the war and the larger proportion of the cost of repatriation have been paid from loans. The total cost from both sources to the 30th June, 1927, is set out in the following table :—

COST OF WAR SERVICES TO 30th JUNE, 1927.

Year.	From Revenue. (a)	From War Loan Fund.	Total.
	£	£	£
1914–15	640,218	14,471,117	15,111,335
1915–16	3,778,378	37,423,568	41,201,946
1916–17	8,427,329	53,114,237	61,541,566
1917–18	11,863,251	55,095,109	66,958,360
1918–19	21,255.101	62,192,889	83,447,990
1919–20	24,751,732	45,385,586	70,137,318
1920–21	33,286,233	24,148,501	57,434,734
1921–22	31,337,164	7,576,977	38,914,141
1922–23	30,100,472	1,762,694	31,863,166
1923–24	28,770,106	2,412,015	31,182,121
1924–25	28,482,761	975,612	29,458,373
1925–26	29,171,850	324,225	29,496,075
1926–27	29,209,083	697,289	29,906,372
Total Expenditure ..	281,073,678	305,579,819	586,653,497
Indebtedness to the Government of the United Kingdom for payments made, services rendered, and goods supplied during the war			43,398,098
War Gratuity Paid in Cash			27,466,162
Total			657,517,757

(a) Including the amounts spent from Trust Fund War Pensions Account.

§ 6. Old-age and Invalid Pensions.

1. General.—In previous issues of this work an account was given of the introduction of the old-age pension system into Australia, together with a detailed description of the Commonwealth Invalid and Old-age Pensions Act of 1908 which became operative on 1st July, 1909. (See Year Books, Nos. 3 to 8.) An amendment of this Act, assented to on 30th September, 1916, made a very important alteration. Section 24 originally enacted that the pension "shall not exceed the rate of twenty-six pounds per annum in any event, nor shall it be at such a rate as will make the pensioner's income, together with pension, exceed fifty-two pounds per annum." It was amended (*a*) by omitting the words "twenty-six pounds," and inserting in their stead the words "thirty-two pounds ten shillings", and (*b*) by omitting the words "fifty-two pounds" and inserting in their stead the words "fifty-eight pounds ten shillings." Section 26 originally enacted that if an applicant for pension was in receipt of board or lodging, the actual or estimated value or cost thereof should be counted as income, to an extent not exceeding five shillings per week. This was amended by omitting the words "five shillings" and inserting in their stead the words "seven shillings and sixpence."

In 1919 the Act was again amended, and the rate of pension raised to £39 per annum and the maximum amount allowable to £65 per annum. The estimated value of board and lodging was raised to 10s. per week, while a further amending Act in 1923 raised the rate of pension to £45 10s. per annum and the maximum amount allowable to £78 per annum.

In 1925 an amending Act increased the rate of pension to £52 per annum and the maximum amount allowable to £84 10s. per annum from 1st October, 1925.

In 1920 special provision was made for a permanently blind person, by which the amount of pension may be at such a rate (not exceeding £52) per annum, as will make his income, together with the pension, equal to an amount not exceeding £221 per annum or such other amount as is declared to be a basic wage.

2. **Old-age Pensions.**—(i) *Summary, 1927.* Details regarding Old-age Pensions as at 30th June, 1927, are as follows :—

OLD-AGE PENSIONS.—SUMMARY, 1927.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Claims examined during year ended 30th June, 1927 ..	8,174	5,535	2,887	1,422	1,124	994	20,136
Claims rejected	1,043	306	452	89	90	45	2,025
Claims granted	7,131	5,229	2,435	1,333	1,034	949	18,111
Transfers from other States	685	659	232	269	139	156	2,140
Existing 30th June, 1926 ..	49,388	36,800	16,250	11,112	6,940	6,428	126,918
	57,204	42,688	18,917	12,714	8,113	7,533	147,169
Deduct—							
Deaths	3,831	2,791	1,259	783	471	401	9,536
Cancellations and transfers to other States ..	1,843	1,195	422	394	316	229	4,399
	5,674	3,986	1,681	1,177	787	630	13,935
Old-age Pensions existing on 30th June 1927 ..	51,530	38,702	17,236	11,537	7,326	6,903	133,234
Number per 1,000 of population	21.67	22.41	19.27	20.06	19.03	33.16	21.60

(ii) *Sexes of Pensioners.* Of the 133,234 persons in receipt of pensions at 30th June, 1927, 54,333 (or 40 per cent.) were males, and 78,901 (or 59 per cent.) were females. Details for the several States are as follows :—

OLD-AGE PENSIONS.—SEXES OF PENSIONERS, 1927.

State.	Males.	Females.	Total.	(a)Masculinity.
New South Wales	21,990	29,540	51,530	−14.65
Victoria	14,653	24,049	38,702	−24.28
Queensland	7,568	9,668	17,236	−12.18
South Australia	4,129	7,408	11,537	−28.42
Western Australia	3,200	4,126	7,326	−12.64
Tasmania	2,793	4,110	6,903	−19.08
Total	54,333	78,901	133,234	−18.44

(a) Excess of males over females in each 100 of total pensioners. It will be noted that in every State there is an excess of female pensioners.

(iii) *Ages and Conjugal Condition of Pensioners.* The recorded ages of the 18,111 persons to whom pensions were granted during the year 1926–27 varied considerably, ranging from 2,844 at age 60 to one at age 100. Particulars for quinquennial age-groups are as follows :—

OLD-AGE PENSIONS GRANTED 1926-27—AGES AND CONJUGAL CONDITION OF PENSIONERS.

Age Groups.	Males.				Females.				Grand Total.
	Single.	Married.	Widowed.	Total.	Single.	Married.	Widowed.	Total.	
60–64 ..	323	724	180	1,227	723	2,868	2,353	5,944	7,171
65–69 ..	1,224	2,940	929	5,093	211	1,065	773	2,049	7,142
70–74 ..	337	948	385	1,670	84	413	379	876	2,546
75–79 ..	91	269	165	525	32	106	192	330	855
80–84 ..	21	64	61	146	12	27	97	136	282
85–89 ..	6	14	21	41	4	3	46	53	94
90 and over ..	..	2	3	5	1	1	14	16	21
Total ..	2,002	4,961	1,744	8,707	1,067	4,483	3,854	9,404	18,111

3. Invalid Pensions.—(i) *Summary, 1927.* Details as at 30th June, 1927, are given hereunder :—

INVALID PENSIONS.—SUMMARY, 1927.

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
Claims examined during year ended 30th June, 1927 ..	4,435	2,718	1,644	522	651	448	10,418
Claims rejected	1,083	407	443	92	216	131	2,372
Claims granted	3,352	2,311	1,201	430	435	317	8,046
Transfers from other States..	242	89	97	70	33	45	576
Existing 30th June, 1926 ..	20,193	14,062	6,800	2,986	2,632	2,130	48,803
	23,787	16,462	8,098	3,486	3,100	2,492	57,425
Deduct—							
Deaths	1,118	721	421	175	230	130	2,795
Cancellations and Transfers to other States ..	1,024	414	320	182	171	120	2,231
	2,142	1,135	741	357	401	250	5,026
Invalid Pensions existing 30th June, 1927	21,645	15,327	7,357	3,129	2,699	2,242	52,399
Number per 1,000 of population	8.81	8.88	8.23	5.44	7.01	10.77	8.50

(ii) *Sexes of Pensioners.* Of the 52,399 persons in receipt of invalid pensions on 30th June, 1927, 23,437, or 45 per cent., were males, and 28,962, or 55 per cent., were females. Details for the several States are as follows :—

INVALID PENSIONS.—SEXES OF PENSIONERS, 1927.

State.	Males.	Females.	Total.	(*a*) Masculinity.
New South Wales	9,576	12,069	21,645	−11.52
Victoria..	6,945	8,382	15,327	−9.38
Queensland	3,489	3,868	7,357	−5.15
South Australia	1,135	1,994	3,129	−27.45
Western Australia	1,305	1,394	2,699	−3.30
Tasmania	987	1,255	2,242	−11.95
Total	23,437	28,962	52,399	−10.54

(*a*) Excess of males over females in each 100 of total pensioners.

(iii) *Ages and Conjugal Condition of Pensioners, 1927.* The recorded ages of the 8,046 persons to whom invalid pensions were granted during the period under review varied from 16 to 83. The following table gives particulars of those up to age 20, and in decennial age-groups thereafter :—

INVALID PENSIONS.—AGES AND CONJUGAL CONDITION OF PENSIONERS, 1927.

Age Groups.	Males.				Females.				Grand Total.
	Single.	Married.	Widowed.	Total.	Single.	Married.	Widowed.	Total.	
16–19 ..	388	..	..	388	452	1	..	453	841
20–29 ..	367	80	5	452	488	27	3	518	970
30–39 ..	207	287	8	502	273	101	35	409	911
40–49 ..	222	547	47	816	247	228	210	685	1,501
50–59 ..	472	920	146	1,538	332	592	692	1,616	3,154
60–69 ..	76	161	47	284	19	83	137	239	523
70–79 ..	4	40	18	62	8	23	46	77	139
80 and over ..	..	2	3	5	2	..	..	2	7
Total ..	1,736	2,037	274	4,047	1,821	1,055	1,123	3,999	8,046

4. **Cost of Administration.**—Under the State régime the cost of administration differed considerably in the several States, and for 1908–9 represented in New South Wales 4.17 per cent. of the amount actually paid in pensions. In Victoria for the same year the corresponding percentage was 0.70. During the year 1926–27 the total cost to the Commonwealth of administering the Old-age and Invalid Pensions Department was £116,008, or about 1.2 per cent. of the amount actually paid in pensions. Details concerning the cost of administration for 1926–27 are as follows :—

OLD-AGE AND INVALID PENSIONS.—COST OF ADMINISTRATION, 1926-27.

Heading.	Amount.
	£
Salaries	49,328
Payments to State Governments and payment of commission to Postmaster-General's Department, at 11s. 6d. per £100 paid	48,151
Postage and telegrams	4,983
Medical examinations	6,834
Other expenses	6,712
Total	116,008

The actual sum disbursed in Old-age and Invalid Pensions in the financial year 1926-27, apart from the cost of administration and inclusive of the amount paid to asylums for the maintenance of pensioners, was £9,144,589.

5. **Summary.**—The following table gives detailed statistical information concerning the working of the Act for the last five years :—

OLD-AGE AND INVALID PENSIONS.—SUMMARY, AUSTRALIA, 1923 TO 1927.

Financial Year ended 30th June—	Number of Pensioners.			Amount Paid in Pensions.	Amount Paid to Asylums for Maintenance of Pensioners.	Total Payment to Pensioners and Asylums.	Cost of Administration.	Cost of Administration per £100 paid to Pensioners and Asylums.			Average Fortnightly Pension on last day of Financial Year.	
	Old-age.	Invalid.	Total.									
				£	£	£	£	£	s.	d.	s.	d.
1923	107,389	40,064	147,453	5,337,936	86,080	5,424,016	87,910	1	12	5	28	9
1924	113,054	42,617	155,671	6,426,752	97,129	6,523,881	92,366	1	8	4	33	9
1925	117,516	44,840	162,356	6,896,401	96,504	6,992,905	94,486	1	7	0	33	8
1926	126,918	48,803	175,721	8,146,636	105,751	8,252,387	99,620	1	4	2	38	7
1927	133,234	52,399	185,633	9,034,938	109,651	9,144,589	116,008	1	5	4	38	6

§ 7. Maternity Allowance.

During the session of 1912 the Federal Parliament passed an Act (assented to on 10th October, 1912) providing for the payment of maternity allowances. The scope and main provisions of the Act are given in Year Book No. 14, p. 1047. The most important conditions are that the sum of five pounds is payable in the case of each confinement resulting in the birth of a viable child whether such child was born alive or dead. The mother must be a native of the Commonwealth, or intend to settle permanently therein. No payment is made in the case of an aboriginal or an Asiatic.

The following table gives a summary in connexion with the working of the Maternity Allowance Act for the years 1923 to 1927 :—

MATERNITY ALLOWANCE.—SUMMARY, 1923 TO 1927.

Year.	Claims Paid.	Claims Rejected.	Amount Paid.	Cost of Administration.	Cost per £100 of allowance paid.		
			£	£	£	s.	d.
1922-23 ..	137,687	421	688,435	16,008	2	6	6
1923-24 ..	134,035	432	670,175	14,770	2	4	1
1924-25 ..	137,641	455	688,205	16,425	2	7	9
1925-26 ..	136,171	517	680,855	15,702	2	6	1
1926-27 ..	132,056	1,122	660,280	16,181	2	9	0

§ 8. War Pensions.

1. **General.**—An Act for the provision of war pensions was passed in 1914 and amended in 1915 and 1916. Its scope can be determined by the following extract from section 3. "Upon the death or incapacity of any member of the forces whose death or incapacity results, or has resulted, from his employment in connexion with warlike operations in which His Majesty is, or has since the commencement of the present state of war been engaged, the Commonwealth shall, subject to this Act, be liable to pay to the member or his dependants, or both, as the case may be, pensions in accordance with this Act."

2. **Number of Pensioners.**—The following table shows the number of pensioners and the places where payments were made at the 30th June, 1927 :—

WAR PENSIONS.—NUMBER OF PENSIONERS, 1927.

Where Paid.	Incapacitated Members of the Forces.	Dependants of— Deceased Members.	Dependants of— Incapacitated Members.	Total.
New South Wales	24,576	10,939	46,830	82,345
Victoria	23,514	12,276	50,690	86,480
Queensland	7,854	3,551	15,059	26,464
South Australia	4,282	3,460	8,847	16,589
Western Australia	7,479	3,519	15,691	26,689
Tasmania	2,836	1,577	6,720	11,133
London	1,555	4,248	3,379	9,182
South Africa	50	41	62	153
New Zealand	218	246	268	732
Other Overseas	24	8	22	54
Total	72,388	39,865	147,568	259,821

3. **Expenditure on War Pensions, 1927.**—The expenditure on war pensions for the year ended 30th June, 1927, is given in the table hereunder :—

WAR PENSIONS.—EXPENDITURE, 1926–27.

Where Paid.	Amount.	Where Paid.	Amount.
	£		£
New South Wales	2,596,130	London and elsewhere	391,192
Victoria	2,181,219		7,558,559
Queensland	810,368	Payments in Australia in respect of other countries	293,013
South Australia	502,846		
Western Australia	767,697		7,851,572
Tasmania	309,107	Less amounts from other countries, including payments by contra	374,476
		Total	7,477,096

4. Cost of Administration.—The cost of administration in 1926–27 was £180,610, or 2.4 per cent. on the total amount paid in pensions, made up as follows :—

WAR PENSIONS.—COST OF ADMINISTRATION, 1926–27.

Items.	Total.
	£
Salaries	113,361
Postage and telegrams	3,092
Medical examinations	3,443
Services of Registrars, Police, and Postal Officials	45,430
London Office	3,140
Fees for State Boards	2,097
Miscellaneous	10,047
Total	180,610

§ 9. Commonwealth Public Service Superannuation Fund.

This Fund, which was inaugurated on the 20th November, 1922, is maintained by contributions of officers of Parliament, of employees of the Commonwealth Public Service and the Defence Department, and by payments from the Consolidated Revenue—the latter being made when the officers retire on pension. Full particulars as to the benefits etc., will be found in Official Year Book No. 18, page 383.

The number of contributors to the fund at 30th June, 1927, was 29,843, viz., 26,508 males and 3,335 females, and the average pension contributed for was £109 14s. per annum.

For the year ended 30th June, 1927, receipts were £556,088, of which £377,343 represented employees' contributions, £113,098 from the Consolidated Revenue, and £65,245 from interest. Payments amounted to £548,316 including £132,967 paid in pensions, and investments, £392,238. Of the balance of £1,501,840 which remained on hand on the 30th June, 1927, £1,273,880 was invested in Commonwealth Inscribed Stock.

Pensions in force on the 30th June, 1927, numbered 1,933 with an annual liability of £142,886, of which £96,182 represents the share payable from the Consolidated Revenue.

B. STATE FINANCE.

§ 1. General.

1. Functions of State Governments.—In comparing the financial returns of the States allowance must be made for the various functions discharged by the respective Governments, and for local conditions in each case. Direct comparisons of expenditure are difficult, owing to the fact that functions which in one State are assumed by the Central Government are in another relegated to local governing bodies, and that costly developmental work may, under certain conditions, be not only economically justifiable, but may be essential to progress, while parsimonious expenditure may be an economic blunder. A large expenditure may, therefore, be an indication either of gross extravagance and bad economy on the one hand, or of healthy progress and good economy on the other. Similarly, as regards revenue, imposts which in some States are levied by the Central Government, are in others dealt with locally. Care, therefore, is needed in instituting comparisons, and the particulars contained in this chapter should be read in connexion with those contained in the chapter dealing with Local Government. In many respects, moreover, the budgets of the Australian Governments differ materially from those of most

European countries, owing to the inclusion therein of the revenue and expenditure of departments concerned in rendering public services, such for instance as railways, tramways, water supply, etc., which in other countries are often left to private enterprise.

2. Accounts of State Governments.—The various financial transactions of the States are in each case concerned with one or other of three Funds—the "Consolidated Revenue Fund," the "Trust Funds," and the "Loan Funds." All revenue collected by the State is placed to the credit of its Consolidated Revenue Fund, from which payments are made under the authority of an Annual Appropriation Act passed by the Legislature, or by a permanent appropriation under a special Act. The hypothecation of the revenue from a specific tax to the payment for some special service is not practised in Australia, all statutory appropriations ranking on an equality as charges on the Consolidated Revenue Fund. The Trust Funds comprise all moneys held in trust by the Government, and include such items as savings' banks funds, sinking funds, insurance companies' deposits, etc. The Loan Funds are debited with all loan moneys raised by the State, and credited with the expenditure therefrom on public works or other purposes.

3. Inter-relation of Commonwealth and State Finance.—The principal alteration in State finance brought about by Federation was that the States transferred to the Commonwealth the large revenue received by the Customs and Postal Departments, and were relieved of the expenditure connected with these and the Defence Departments, while, in their place, a new item of State revenue was introduced, viz., the payment to the States of a Commonwealth subsidy. With regard to this, an important development in the financial relations of the Commonwealth and State Governments was discussed at the Premiers' Conference of May, 1923. The main problem for settlement was that arising from the raising and allocation of the revenues of the Commonwealth and States. The Conference aimed at the termination of the present arrangement under which the Commonwealth pays to the States on a *per capita* basis part of the revenue which it collects; concurrently it was hoped to simplify the entire taxation systems of Australia.

The Commonwealth Prime Minister submitted a scheme intended to secure the attainment of both of these objects, but it did not prove acceptable to the State Ministers, who put forward counter-proposals for the complete retirement of the Commonwealth from the field of income taxation. The States were willing on that condition to relinquish the capitation payments and to contribute to the Commonwealth Treasury sums to cover any Commonwealth loss entailed under the proposals.

As Commonwealth Ministers could not accept the offer of the States, the Prime Minister proposed that the Commonwealth should vacate the field of income taxation so far as it related to individuals, but should retain the right to tax companies up to a maximum limit of 2s. 6d. in the £1. As a set-off against this the Commonwealth would cease the payment to the States of the capitation allowances and the interest on the transferred properties. Before completing the new scheme it would be necessary to ascertain the exact value of the field to be vacated by the Commonwealth, because certain cash payments to be made by the Commonwealth to the States to save embarrassment of State finances could not be calculated until that value was ascertained.

These suggestions were much more favourably received, and ultimately five of the States—New South Wales dissenting—agreed to accept the principle of the new Commonwealth proposals.

The statistics relating to income tax were carefully investigated, and it was found that figures on which to base payments to the States would not be available for some time. The operation of the scheme was therefore deferred for one year. In June, 1924, the scheme was again considered by the Commonwealth Government, but owing to the continuance of opposition the operation of the proposals was further postponed until early in the year 1926.

A satisfactory conclusion was not reached at the Conference of Commonwealth and State Ministers held in May, 1926. In his Budget Speech of 8th July, 1926, however, the Commonwealth Treasurer outlined the Government's proposals for terminating the present relations. In pursuance of these proposals the Commonwealth Parliament passed the States Grants Act (No. 4 of 1927) repealing the *per capita* payments specified by the Surplus Revenue Act (No. 8 of 1910). The Act further provides for the payment to the States on a population basis of any surplus revenue in the hands of the Commonwealth Treasurer on 30th June, 1928, and of each year thereafter. The payments to be made to the States during 1927-28 will be equal in amount to those which would have been made under the provisions of the Surplus Revenue Act 1910, and are designed to afford the States ample time to adjust their finances to the impending changes. The Commonwealth Government invited the States to a further conference in June, 1927, at which the whole question was discussed in the light of the changes made by the provisions of the States Grants Act.

Meanwhile efforts were made to arrange for one collecting authority for both State and Federal income taxes. Agreements were made between the Commonwealth, on the one hand, and all the States except Western Australia, on the other, under which the State taxation officers collect both taxes, except where the Commonwealth incomes are derived from two or more States. In Western Australia there has been for some years one collecting authority only—the Commonwealth.

Provision for the taking over by the Commonwealth of certain of the public debts of the States is made in section 105 of the Constitution, and a proposed law extending this provision to the whole of the State indebtedness, which passed both Houses of the Federal Legislature by the statutory majority, was submitted to a referendum at the election in April, 1910, and received the requisite endorsement by the electorate. No action had, however, been taken in connexion therewith, until the Conference referred to above.

At a further Conference of Premiers in 1927, proposals submitted by the Commonwealth Government were tentatively affirmed by the several Premiers and subsequently validating acts ratifying the agreement were passed by the Commonwealth and State Governments. In accordance with the provisions of section 128 of the Commonwealth Constitution, the matter will be submitted to a referendum of Commonwealth electors during November, 1928. A temporary agreement on similar terms is operative for the period 1st July, 1927, to 30th June, 1929.

The following is a brief outline of the principal permanent provisions of the "Financial Agreement":—

> The Commonwealth shall take over on 1st July, 1929, the unpaid balance of the gross public debts of each State existing on 30th June, 1927, viz., £672,120,415 (see § 4, Division II., 2), and all other debts of each State existing on 1st July, 1929, for moneys borrowed by that State which are deemed to be moneys borrowed by the Commonwealth for, and on behalf of, that State, and shall contribute £7,584,912 per annum for 58 years towards the interest charges thereon.
>
> The Commonwealth shall contribute 2s. 6d. per cent. and the States 5s. per cent. per annum into a sinking fund to extinguish existing debts in 58 years. Future debts raised after 1st July, 1927, are to be extinguished in 53 years from their respective dates of issue by the establishment of a sinking fund to which Commonwealth and State each contribute 5s. per cent. per annum.
>
> All future borrowing on behalf of Commonwealth and States Governments will be arranged by the Commonwealth according to the decisions of the Loan Council, composed of representatives of Commonwealth and all State Governments.
>
> In full payment for properties transferred from the States, the Commonwealth Government shall take over State debts to the value of £10,924,323 bearing interest at 5 per cent.

§ 2. State Consolidated Revenue Funds.

Division I.—Revenue.

1. **General.**—The principal sources of State revenue are :—

(*a*) Taxation.
(*b*) The public works and services controlled by the State Governments.
(*c*) Sale of and rental from Crown lands.
(*d*) The Commonwealth subsidy.
(*e*) Miscellaneous sources, comprising fines, fees, interest, etc.

Of these sources, that yielding the largest revenue for the States as a whole is the group of public works and services, the principal contributor being the Government railways and tramways. Next in magnitude comes Taxation, followed in order by the Commonwealth Subsidy and Land Revenue.

2. **Revenue Received.**—The following table furnishes particulars of the total amounts and the amounts per head of consolidated revenue received by the several States during the five years 1922–23 to 1926–27 :—

STATE CONSOLIDATED REVENUE, 1922–23 TO 1926–27.

Year.	N.S.W.	Victoria. (*a*)	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
			Total Collections.				
	£	£	£	£	£	£	£
1922–23	36,145,944	21,634,677	12,599,403	8,431,700	7,207,492	2,174,062	88,193,278
1923–24	37,351,809	23,075,968	13,428,039	8,932,340	7,865,595	2,447,677	93,101,428
1924–25	38,822,588	24,304,887	14,897,256	9,733,038	8,381,446	2,762,013	98,901,228
1925–26	38,540,031	25,269,756	15,599,718	10,474,094	8,808,166	2,726,482	101,418,247
1926–27	44,149,566	27,128,700	16,147,787	10,784,897	9,750,833	3,040,220	111,002,003
			Per Head of Population.				
	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*
1922–23	16 12 8	13 12 1	15 19 6	16 8 7	20 11 6	9 18 7	15 13 1
1923–24	16 17 8	14 3 11	16 11 1	17 0 6	20 19 7	11 3 6	16 3 10
1924–25	17 4 5	14 13 4	17 16 10	18 1 6	22 4 7	12 13 7	16 16 9
1925–26	16 15 4	15 0 1	18 2 3	18 19 9	23 13 4	12 11 3	16 18 6
1926–27	18 16 2	15 16 11	18 6 1	19 0 10	25 14 11	14 3 2	18 3 10

(*a*) Includes revenue from motor vehicle taxation not paid into Consolidated Revenue.

During the four years from 30th June, 1923, to 30th June, 1927, the aggregate revenue of the States increased by no less a sum than £22,808,725, or about 25 per cent. Increases were in evidence in all the States, the largest being that of £8,003,622 in New South Wales. This general advance is the more notable since, during recent years, a smaller amount has been received from the Commonwealth in the way of subsidy than was the case up to 1910.

There has been a marked increase in the collections per head in all the States. Western Australia throughout the period has occupied the premier position, and in 1926–27 the revenue per head in that State exceeded the average for Australia by about 41 per cent. In Tasmania, however, the revenue per head averaged about 77 per cent. only of the average for Australia.

3. Sources of Revenue.—(i) *General.*— Classifying the revenue of the several States in the manner indicated in 1 *ante*, particulars for the year 1926–27 are as follows :—

STATE CONSOLIDATED REVENUE.—SOURCES, 1926–27.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
TOTAL REVENUE.							
	£	£	£	£	£	£	£
Taxation	11,930,050	6,411,936	4,502,340	2,798,292	1,211,343	1,229,823	28,083,784
Public works and services ..	25,659,672	15,610,901	7,900,383	6,058,724	5,137,966	970,437	61,338,083
Land	2,214,012	410,278	1,427,677	297,131	550,912	75,671	4,975,681
Commonwealth subsidy	2,917,411	2,127,159	1,095,338	703,816	*a*1,126,544	*b* 644,859	8,615,127
Miscellaneous ..	1,428,421	2,568,426	1,222,049	926,934	1,724,068	119,430	7,989,328
Total ..	44,149,566	27,128,700	16,147,787	10,784,897	9,750,833	3,040,220	111,002,003
PER HEAD OF POPULATION.							
	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*
Taxation	5 1 8	3 14 11	5 2 1	4 18 10	3 4 0	5 14 6	4 12 1
Public works and services ..	10 18 7	9 2 5	8 19 1	10 13 11	13 11 4	4 10 5	10 1 0
Land	0 18 11	0 4 9	1 12 4	0 10 6	1 9 1	0 7 1	0 16 4
Commonwealth subsidy	1 4 10	1 4 10	1 4 10	1 4 10	*a* 2 19 6	*b* 3 0 1	1 8 3
Miscellaneous ..	0 12 2	1 10 0	1 7 9	1 12 9	4 11 0	0 11 1	1 6 2
Total ..	18 16 2	15 16 11	18 6 1	19 0 10	25 14 11	14 3 2	18 3 10

(*a*) Including special grant of £353,112 in respect of 1925–26 not previously brought to account, and £212,793 for 1926–27. (*b*) Including special grant of £378,000.

In connexion with the item Public Works and Services, it should be borne in mind that services performed by the Government in one State may, in another, be carried out by a Board or Trust. For instance, in New South Wales and Western Australia the tramway systems are controlled by the Government, while in the other States ownership is largely vested in Trusts or private companies. Harbour and river services and water supply and sewerage are also controlled in some cases by the State and in others by Trusts.

The magnitude of the revenue per head from public works and services in the case of Western Australia is mainly due to the fact that the number of miles of railway in that State is large compared with the population, while the revenue earning power of the railways is also high. In New South Wales and Western Australia the revenue from tramways is also included.

(ii) *Relative Importance of Various Sources.* The following table indicates the relative importance of the different sources of revenue in the several States, by showing the percentage which each item of revenue bears on the total for the State for the year 1926–27 :—

STATE CONSOLIDATED REVENUE.—PERCENTAGE OF ITEMS, 1926–27.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	%	%	%	%	%	%	%
Taxation	27.02	23.64	27.88	25.95	12.42	40.45	25.30
Public works and services ..	58.12	57.54	48.93	56.18	52.69	31.92	55.26
Land	5.01	1.51	8.84	2.75	5.65	2.49	4.48
Commonwealth subsidy ..	6.61	7.84	6.78	6.53	11.55	21.21	7.76
Miscellaneous	3.24	9.47	7.57	8.59	17.69	3.93	7.20
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00

(iii) *Revenue from Taxation.*—(*a*) *General.* Prior to Federation, duties of Customs and Excise constituted the principal source of revenue from taxation. At present, the most productive State tax is the income tax, imposed in all the States, and representing for 1926–27 55 per cent. of the total taxation revenue. For 1926–27, stamp duties occupied second place. In addition to these, a State land tax and licence fees of various kinds are collected in all the States, while a dividend tax is levied in Western Australia. The total revenue from taxation collected by the States during the year 1926–27 was £28,083,784, details of which are set forth in the table hereunder :—

STATE CONSOLIDATED REVENUE FROM TAXATION, 1926–27.

Taxation.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	£	£	£	£	£	£	£
Probate and succession duties	1,223,979	1,111,876	403,655	242,187	66,366	151,200	3,199,263
Other stamp duties ..	1,751,962	1,059,655	556,581	420,932	252,693	220,200	4,262,024
Land Tax	2,870	517,229	481,937	367,318	147,415	114,322	1,631,091
Income Tax	7,739,627	2,382,991	2,821,217	1,359,437	*a* 619,140	599,550	15,521,962
Licences	243,856	391,647	137,576	36,304	71,176	50,039	930,598
Racing Taxation	488,432	142,071	101,374	83,387	54,553	22,020	891,837
Motor Taxation	*c* 479,323	*b* 804,903	*b*	288,727	*b*	42,007	1,614,960
Other Taxation	..	1,564	..	..	..	30,485	32,049
Total	11,930,050	6,411,936	4,502,340	2,798,292	1,211,343	1,229,823	28,083,784

(*a*) Includes £273,613 Dividend Tax. (*b*) Not paid into Consolidated Revenue.
(*c*) Portion only—balance not paid into Consolidated Revenue.

The total amount and the amount per head raised from taxation by the several State Governments during the five years 1922–23 to 1926–27 are given in the following table :—

STATE CONSOLIDATED REVENUE FROM TAXATION, 1922–23 TO 1926–27.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
				TOTAL.			
	£	£	£	£	£	£	£
1922–23	7,799,118	4,077,046	3,330,885	1,816,776	987,558	728,175	18,739,558
1923–24	7,988,131	4,476,158	3,617,201	1,841,720	1,173,568	928,360	20,025,138
1924–25	8,115,151	4,819,580	3,914,161	2,290,754	1,224,030	1,306,361	21,670,037
1925–26	8,850,877	5,179,269	4,104,122	2,660,419	1,418,050	1,239,967	23,452,704
1926–27	11,930,050	6,411,936	4,502,340	2,798,292	1,211,343	1,229,823	28,083,784
				PER HEAD OF POPULATION.			
	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*
1922–23	3 11 9	2 11 3	4 4 6	3 10 10	2 17 6	3 6 6	3 6 7
1923–24	3 12 3	2 15 1	4 9 2	3 10 2	3 6 4	4 4 9	3 9 9
1924–25	3 12 0	2 18 2	4 13 9	4 5 1	3 7 3	5 19 11	3 13 10
1925–26	3 17 0	3 1 6	4 15 3	4 16 5	3 16 2	5 14 3	3 18 4
1926–27	5 1 8	3 14 11	5 2 1	4 18 10	3 4 0	5 14 6	4 12 1

During the period between 30th June, 1923, and 30th June, 1927, State revenue from taxation increased by about 50 per cent., the increase varying considerably in the different States and in the different sources of taxation. During this period the income tax collections expanded from £9,667,762 in 1922–23 to £15,521,962 in 1926–27, an increase of 60 per cent., which was principally due to the broadening of the basis of assessment and the raising of the rates of tax. This increase occurred in every State, varying from 23 per cent. in Western Australia to 69 per cent. in Tasmania.

Taking the States as a whole, taxation increased by £1 5s. 6d. per head during the period from 1922–23 to 1926–27, the most marked increase, £2 8s. 0d., occurring in the case of Tasmania. It may also be mentioned that Western Australia was the only State showing a decrease in taxation per head for the year 1926–27 as compared with 1925–26.

(*b*) *Probate and Succession Duties.* Probate duties have been levied for many years in all the States, but the provisions of the Acts governing the payment of duty differ widely both in regard to the ordinary rates and those which apply to special beneficiaries. A table showing the values of the estates in which probates and letters of administration were granted is given later. (See Section E. Private Finance § 8 hereinafter.)

The duties collected for the financial years 1922–23 to 1926–27 are as follows :—

STATE PROBATE AND SUCCESSION DUTIES.—COLLECTIONS, 1922–23 TO 1926–27.

State.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
New South Wales	1,176,596	965,200	1,248,336	1,171,364	1,223,979
Victoria..	697,482	798,315	802,333	940,609	1,111,876
Queensland	257,402	280,472	334,801	356,758	403,665
South Australia	205,382	191,373	225,999	269,332	242,187
Western Australia ..	45,997	66,969	68,114	84,635	66,366
Tasmania	56,530	71,750	88,404	74,370	151,200
Total	2,439,389	2,374,079	2,767,987	2,897,068	3,199,263

(*c*) *Other Stamp Duties.* The revenue derived from stamp duties (exclusive of probate and succession duties) for the years 1922–23 to 1926–27 is shown in the accompanying table :—

STATE STAMP DUTIES.—COLLECTIONS, 1922–23 TO 1926–27.

State.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
New South Wales ..	1,460,436	1,538,924	1,478,392	1,562,363	1,751,963
Victoria..	1,117,839	1,179,364	963,307	1,017,351	1,059,655
Queensland	353,745	405,056	416,539	443,702	556,581
South Australia	397,050	430,045	442,823	463,677	420,932
Western Australia ..	173,453	194,176	204,108	231,407	252,693
Tasmania	166,424	180,773	182,996	177,858	220,200
Total	3,668,947	3,928,338	3,688,165	3,896,358	4,262,024

(*d*) *Land Tax.* All the States impose a Land Tax, although Queensland, the last State to fall into line, collected its first levy in 1915–16. In the other States the impost is of long standing. In New South Wales the State Land Tax is levied on the unincorporated portion of the western division of the State only.

The following table shows the amount collected by means of such taxes during the financial years 1922–23 to 1926–27 :—

STATE LAND TAX.—COLLECTIONS, 1922–23 TO 1926–27.

State.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
New South Wales ..	2,570	2,657	2,569	2,667	2,870
Victoria..	392,594	412,165	421,662	457,441	517,229
Queensland	417,865	445,873	452,481	468,020	481,937
South Australia	197,107	184,226	185,681	244,132	367,318
Western Australia ..	79,983	71,449	113,867	145,830	147,415
Tasmania	97,352	120,657	124,114	126,251	114,322
Total	1,187,471	1,237,027	1,300,374	1,444,341	1,631,091

(e) *Income Tax.* A tax on the incomes of persons, whether derived from personal exertion or from property, is also imposed in all the States. As might be expected, the rates, exemptions, etc., are widely divergent, but the general principles of the several Acts are similar. The Dividend Duties Act of Western Australia supplied to a certain extent the place of an income tax in that State in former years, but, with the increasing demands upon the Treasury, the levying of a direct income tax was found necessary.

The following table shows the total amount collected in the several States during the years 1922–23 to 1926–27. In the case of Western Australia the amount of dividend duty collected is included.

The total for 1926–27 represents an increase of over 37 per cent. on the collections in 1922–23.

STATE INCOME AND DIVIDEND TAXES.—COLLECTIONS, 1922–23 TO 1926–27.

State.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
New South Wales ..	4,196,228	4,373,519	4,661,892	5,392,946	7,739,627
Victoria..	1,514,256	1,702,483	2,076,656	2,238,429	2,382,991
Queensland	2,149,607	2,300,044	2,509,913	2,617,253	2,821,217
South Australia	903,460	894,283	1,268,898	1,422,993	1,359,437
Western Australia ..	579,060	719,160	716,109	832,239	619,140
Tasmania	325,151	431,271	781,194	721,231	599,550
Total	9,667,762	10,420,760	12,014,662	13,225,091	15,521,962

(*f*) *Commonwealth and State Taxation.* The table hereunder shows the combined Commonwealth and State taxation for each of the years 1922–23 to 1926–27, as well as the amount per head of population :—

TOTAL COMMONWEALTH AND STATE TAXATION, 1922–23 TO 1926–27.

Particulars.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
Commonwealth taxation ..	49,885,017	50,852,483	52,835,690	54,373,005	58,994,809
State taxation	18,739,558	20,025,138	21,670,037	23,452,704	28,083,784
Total . ..	68,624,575	70,877,621	74,505,727	77,825,709	87,078,593
Taxation per head—					
Commonwealth ..	£8/17/1	£8/16/11	£8/19/11	£9/1/6	£9/13/1
State	£3/6/7	£3/9/9	£3/13/10	£3/18/4	£4/12/1
Total	£12/3/7	£12/6/7	£12/13/8	£12/19/9	£14/5/0

Whilst Customs and Excise revenue expanded during the period by £10,680,349. and other Commonwealth taxation decreased by £1,570,557, resulting in a net increase in Commonwealth taxation of £9,109,792, the State taxation advanced by £9,344,226, the aggregate increase being £18,454,018. The amount *per capita* of total taxation has increased about 17 per cent. in the period under review.

(iv) *Public Works and Services.* A very large proportion of State revenues is made up of receipts from public works and services under the control of the Governments. The principal of these are railways and tramways, harbour works, and water supply and sewerage, while, in addition, State batteries for the treatment of auriferous ores exist in Western Australia, and various minor revenue-producing services are rendered by the Governments of all States. For the year 1926–27 the aggregate revenue from these sources was £61,338,083, or 55 per cent. of the revenue from all sources. Details of revenue from public works and services for the year 1926–27 are as follows:—

STATE REVENUE FROM PUBLIC WORKS AND SERVICES, 1926–27.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	£	£	£	£	£	£	£
Railways and tramways ..	22,980,486	a13,373,119	a7,349,501	a4,094,133	3,869,301	a 542,165	52,208,705
Harbour services ..	1,401,017	213,111	83,242	690,949	279,034	..	2,667,353
Public batteries ..	..	..	..	..	21,921	..	21,921
Water supply and sewerage	245,776	b 539,981	..	672,098	498,272	..	1,956,127
Other public services	1,032,393	1,484,690	467,640	601,544	469,438	428,272	4,483,977
Total	25,659,672	15,610,901	7,900,383	6,058,724	5,137,966	970,437	61,338,083

(a) Railways only. (b) Water supply only.

(v) *Lands.* The revenue from the sale and rental of Crown lands has, with few exceptions, been treated from the earliest times as forming part of the Consolidated Revenue Funds, and has been applied to meet ordinary expenses. Where the rentals received are for lands held for pastoral or residential purposes such application of the revenue would appear justifiable. On the other hand, where the rentals are for mineral and timber lands, and in all cases of sales of lands, the proceeding is essentially a disposal of capital to defray current expenses, and is, therefore, open to criticism. The following table gives the revenue from sales and rentals of Crown lands for the year 1926–27:—

STATE LAND REVENUE, 1926–27.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	£	£	£	£	£	£	£
Sales ..	99,915	80,605	6	138,751	208,793	25,317	553,387
Rentals ..	2,114,097	329,673	1,427,671	158,380	342,119	50,354	4,422,294
Total ..	2,214,012	410,278	1,427,677	297,131	550,912	75,671	4,975,681

(vi) *Commonwealth Subsidy.* The payments to the States of Commonwealth subsidy represent in each instance a considerable proportion of the States' revenue, and for the year 1926–27 aggregated £8,615,127. A reference to the proposals to discontinue the payment of this subsidy will be found in Section B, §1. 3. of this chapter. The percentage represented by the subsidy received by each State for 1926–27 on the total revenue of that State is shown in the following table:—

COMMONWEALTH SUBSIDY PAID TO EACH STATE, 1926–27.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	£	£	£	£	£	£	£
Commonwealth subsidy	2,917,411	2,127,159	1,095,338	703,816	a1,126,544	b 644,859	8,615,127
Total revenue ..	44,149,566	27,128,700	16,147,787	10,784,897	9,750,833	3,040,220	111,002,003
	%	%	%	%	%	%	%
Percentage of subsidy on revenue ..	6.61	7.84	6.78	6.53	11.55	21.21	7.76

(a) Including special grant of £353,112 in respect of 1925–26 not previously brought to account, and £212,793 for 1926–27. (b) Including special grant of £378,000.

(vii) *Miscellaneous.* In addition to the foregoing, there are in each State several miscellaneous sources of revenue, including such items as interest, fines, fees, etc., which for the year 1926–27 aggregated £7,989,328. Of this amount, interest was responsible for £4,737,410.

Division II.—Expenditure.

1. **General.**—The principal heads of State expenditure from Consolidated Revenue Funds are :—

(*a*) Interest and sinking funds in connexion with public debt.
(*b*) Working expenses of railways and tramways.
(*c*) Justice.
(*d*) Police.
(*e*) Penal establishments.
(*f*) Education.
(*g*) Medical and charitable expenditure.
(*h*) All other expenditure.

Of these, that of working expenses of railways and tramways was the most important, and for the year 1926–27 represented about 38 per cent. of the aggregate expenditure from the Consolidated Revenue Fund. Next in importance for that year was the item of interest and sinking fund in connexion with the public debt, then education, medical and charitable expenditure, and police, in the order named.

2. **Total Expenditure**—The total expenditure from Consolidated Revenue Funds in the several States, and the expenditure per head of population during each of the years 1922–23 to 1926–27 are given in the table hereunder :—

STATE EXPENDITURE.—CONSOLIDATED REVENUE FUNDS, 1922–23 TO 1926–27.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
				TOTAL.			
	£	£	£	£	£	£	£
1922–23	35,342,436	21,611,309	12,784,382	8,426,517	7,612,856	2,472,523	88,250,023
1923–24	37,251,419	23,050,968	13,415,332	8,985,599	8,094,753	2,658,382	93,456,453
1924–25	39,579,058	24,170,483	14,880,288	9,680,037	8,439.844	2,675,618	99,425,328
1925–26	39,814,335	25,559,583	16,154,404	10,460,943	8,907,308	2,698,262	103,594,835
1926–27	42,690,634	27,744,903	16,490,954	11,834,947	9,722,588	2,855,077	111,339,103
				PER HEAD OF POPULATION.			
	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*
1922–23	16 5 4	13 11 10	16 4 4	16 8 5	22 3 1	11 5 11	15 13 8
1923–24	16 16 10	14 3 8	16 10 9	17 2 6	22 17 7	12 2 8	16 5 5
1924–25	17 11 2	14 11 9	17 16 5	17 19 6	23 3 7	12 5 8	16 18 11
1925–26	17 6 5	15 3 7	18 15 2	18 19 5	23 18 8	12 8 8	17 6 3
1926–27	18 3 8	16 4 2	18 13 10	20 17 11	25 13 5	13 5 11	18 4 11

Details of the expenditure are given in the next table.

3. Details of Expenditure for 1926–27.—(i) *General.* The following table shows the total expenditure and expenditure per head under each of the principal items :—

STATE EXPENDITURE.—DETAILS, 1926–27.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
TOTAL.							
	£	£	£	£	£	£	£
Public debt (interest, sinking fund, etc.)	8,719,314	7,516,575	4,831,250	4,034,471	3,301,878	1,164,916	29,568,404
Railways and tramways (working expenses)	17,715,126	*a*10,234,301	*b*6,493,329	*b*3,871,089	2,921,235	*b* 555,641	41,790,721
Justice	573,219	292,383	182,320	78,505	93,019	23,976	1,243,420
Police	1,200,017	872,555	563,391	262,140	215,908	88,725	3,202,736
Penal establishments	174,902	114,397	44,255	46,306	25,400	14,193	419,453
Education	4,105,691	2,573,732	1,522,893	917,452	675,562	305,873	10,101,203
Medical and charitable	2,171,021	1,293,727	649,316	485,609	410,473	160,800	5,170,946
All other expenditure	8,031,344	4,847,233	2,204,200	2,139,377	2,079,113	540,953	19,842,220
Total ..	42,690,634	27,744,903	16,490,954	11,834,947	9,722,588	2,855,077	111,339,103
PER HEAD OF POPULATION.							
	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*
Public debt (interest, sinking fund, etc.) ..	3 14 3	4 7 10	5 9 6	7 2 6	8 14 4	5 8 6	4 16 11
Railways and tramways (working expenses)	7 10 11	*a* 5 19 7	*b* 7 7 2	*b* 6 16 8	7 14 3	*b* 2 11 9	6 17 0
Justice	0 4 10	0 3 5	0 4 2	0 2 9	0 4 11	0 2 3	0 4 1
Police	0 10 3	0 10 2	0 12 9	0 9 3	0 11 5	0 8 3	0 10 6
Penal establishments	0 1 6	0 1 4	0 1 0	0 1 8	0 1 4	0 1 4	0 1 4
Education	1 15 0	1 10 1	1 14 6	1 12 5	1 15 8	1 8 6	1 13 1
Medical and charitable	0 18 6	0 15 1	0 14 9	0 17 2	1 1 8	0 15 0	0 16 11
All other expenditure	3 8 5	2 16 8	2 10 0	3 15 6	5 9 10	2 10 4	3 5 1
Total ..	18 3 8	16 4 2	18 13 10	20 17 11	25 13 5	13 5 11	18 4 11

(*a*) Including 9.79 miles of electric tramways operated by the Victorian Railways. (*b*) Railways only.

(ii) *Relative Importance of Various Items.* The relative importance of the items varies considerably, and the following table shows for each State the percentage under each item on the total expenditure :—

STATE EXPENDITURE.—PERCENTAGES OF ITEMS, 1926–27.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	%	%	%	%	%	%	%
Public debt (interest, sinking fund, etc.)	20.42	27.09	29.30	34.09	33.96	40.80	26.56
Railways and tramways (working expenses)	41.50	*a* 36.89	*b* 39.37	*b* 32.71	30.04	*b*19.46	37.53
Justice	1.34	1.05	1.10	0.66	0.96	0.84	1.12
Police	2.81	3.15	3.42	2.22	2.22	3.11	2.88
Penal establishments	0.41	0.41	0.27	0.39	0.27	0.50	0.38
Education	9.62	9.28	9.23	7.75	6.95	10.71	9.07
Medical and charitable	5.09	4.66	3.94	4.10	4.22	5.63	4.19
All other expenditure	18.81	17.47	13.37	18.08	21.38	18.95	18.27
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00

(*a*) Including 9.79 miles of electric tramways operated by the Victorian Railways. (*b*) Railways only.

The interest and sinking fund on the public debt, together with the working expenses of the railways and tramways, represented for the year 1926–27 about 64 per cent. of the aggregate State expenditure, a proportion which has been maintained with great regularity for many years past.

Division III.—Balances.

1. **Position on 30th June, 1927.**—On various occasions in each of the States the revenue collected for a financial year has failed to provide the funds requisite for defraying the expenditure incurred during that year, the consequent deficit being usually liquidated either by cash obtained from trust funds, or by the issue of Treasury bills. During the period of financial stress resultant upon the crisis of 1893 and the drought conditions of succeeding years, the accumulated overdrafts of several of the States grew very rapidly, and the position now is that no State has a credit balance. The situation on 30th June, 1927, was as follows :—

STATE CONSOLIDATED REVENUE FUND BALANCES, 30th JUNE, 1927.

State.	Debit Balance.		Net Debit Balance.
	Cash Overdraft.	Overdraft liquidated by Treasury Bills.	
	£	£	£
New South Wales	3,246,185	..	3,246,185
Victoria	616,203	977,505	1,593,708
Queensland	1,328,188	..	1,328,188
South Australia	1,050 050	..	1,050,050
Western Australia	129,295	6,140,087	6,269,382
Tasmania	209,408	349,401	558,809
Total	6,579,329	7,466,993	14,046,322

§ 3. State Trust Funds.

1. **Nature.**—In addition to the moneys received as revenue and paid to the credit of their respective Consolidated Revenue Funds, considerable sums are held by the State Governments in trust for various purposes. In most of the States also, sinking funds for the redemption of public debt are provided, and the moneys accruing thereto are paid to the credit of the appropriate trust funds. A similar course is followed in the case of municipal sinking funds placed in the hands of the Governments. In all the States except New South Wales, life assurance companies operating are required to deposit a substantial sum in cash or approved securities with the Government, and these deposits help to swell the trust funds. Various other deposit accounts, superannuation funds, suspense accounts, etc., also find a place. The trust funds have at various times enabled the several State Treasurers to tide over awkward financial positions, but the propriety of allowing deficits to be liquidated in this manner is open to question.

2. **Extent.**—The amount of trust funds held on the 30th June, 1927, was as follows :—

STATE TRUST FUNDS, 30th JUNE, 1927.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
	£	£	£	£	£	£	£
Amount of trust funds	20,009,040	10,946,489	*Dr.*2,364,647	849,928	20,261,880	2,283,384	51,986,074

§ 4. State Loan Funds.

Division I.—Loan Expenditure.

1. **General.**—So far back as the year 1842, revenue collections were supplemented with borrowed moneys, the earliest loan being by New South Wales for the purpose of assisting immigration, at rates of interest varying from 2¾d. to 5¼d. per £100 per diem, or approximately from 4¼ per cent. to 8 per cent. per annum. Australian public borrowing, however, is mainly due to the fact that the State Governments, in addition to ordinary administrative duties, undertake functions which in other countries are usually entrusted to local authorities or left to private enterprise. Foremost amongst these are the construction and control of the railway systems, but loan moneys have largely been used for improvements to harbours and rivers, and the construction of water supply and sewerage works. The State loan expenditure and public debt thus differ very materially from those of most European countries, and from those of the Commonwealth, where such expenditure was very largely incurred for purposes of defence, or in the prosecution of war. As shown above, the State debts consist chiefly of moneys raised and expended with the object of assisting the development of the resources of the country, and are, to a very large extent, represented by tangible assets.

2. **Loan Expenditure, 1926–27.**—For the year ended 30th June, 1927, State expenditure from loan funds was £36,683,177, New South Wales with a total of £10,422,270 and Victoria with £9,277,180 being the principal contributors to this amount. Expenditure on railways and tramways is a very heavy item, but in recent years the settlement of returned soldiers upon the land has absorbed large sums. Details for the year for each State are given in the following table:—

STATE LOAN EXPENDITURE, 1926–27.

Heads of Expenditure.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
	£	£	£	£	£	£	£
Railways and tramways	6,380,610	1,821,005	2,470,083	2,460,555	674,669	29,824	13,836,746
Water supply, sewerage and water conservation	1,105,618	1,541,900	119,563	1,253,390	441,845	..	4,462,316
Harbours, rivers, etc. Roads and bridges	2,200,976	1,104,345	155,511	874,582	376,098	225,137	4,936,649
Public buildings ..	472,969	407,876	196,984	342,707	117,483	50,291	1,588,310
Development of mines, etc.	..	..	..	..	87,598	..	87,598
Advances to settlers ..	*Cr.* 34,554	1,867,763	95,207	*Cr.* 119,608	1,690,368	77,720	3,836,572
Land purchases for settlement.. ..	494,767			12,055	..	*Cr.* 247,146	
Loans to local bodies ..	..	600	451,276	*b* 3,768,747	21,625	64,911	4,307,159
Rabbit-proof fences ..	5,399	32,337	25,301	15,375	..	..	78,412
Other Public works and purposes	*Cr.* 203,515	*a* 2,501,354	85,032	334,215	703,368	128,961	3,549,415
Total	10,422,270	9,277,180	3,598,957	8,942,018	4,113,054	329,698	36,683,177

(*a*) Including £1,893,740 for Electricity supply.
(*b*) Includes £3,456,539 adjustments on account of previous years.

3. **Loan Expenditure, 1922–23 to 1926–27.**—The following table gives the loan expenditure during each of the years 1922–23 to 1926–27:—

STATE LOAN EXPENDITURE, 1922–23 TO 1926–27.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
				TOTAL.			
	£	£	£	£	£	£	£
1922–23	9,794,019	8,764,306	3,701,750	3,480,281	3,389,299	1,153,645	30,283,300
1923–24	7,735,480	8,407,526	4,650,199	3 971,938	3,936,833	712,214	29,414,190
1924–25	9,175,686	8,799,531	4,081,741	3,520,305	4,099,021	242,485	29,918,769
1925–26	11,180,482	8,001,375	3,905,863	5,551,534	4,078,686	540,152	33,258,092
1926–27	10,422,270	9,277,180	3,598,957	8,942,018	4,113,054	329,698	36,683,177
				PER HEAD OF POPULATION.			
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1922–23	4 10 2	5 10 3	4 13 11	6 15 8	9 17 4	5 5 5	5 7 8
1923–24	3 9 11	5 3 6	5 14 8	7 11 5	11 2 6	3 5 0	5 2 5
1924–25	4 1 5	5 6 2	4 17 9	6 10 9	11 5 2	1 2 3	5 2 0
1925–26	4 17 3	4 15 0	4 10 9	10 1 3	10 19 2	2 9 9	5 11 2
1926–27	4 8 9	5 8 5	4 1 7	15 15 9	10 17 2	1 10 8	6 0 3

The loan expenditure per head of population varies in the different States and in different years, reaching its highest point for the five years under review in South Australia in 1926–27 with £15 15s. 9d. per head, and its lowest in Tasmania in 1924–25 with £1 2s. 3d. per head.

4. **Total Loan Expenditure to 30th June, 1927.**—(i) *General.* The total loan expenditure of the States from the initiation of borrowing to the 30th June, 1927, amounted to £661,306,695. The purposes for which this sum was expended are shown in the following table :—

TOTAL STATE LOAN EXPENDITURE TO 30th JUNE, 1927.

Heads of Expenditure.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	£	£	£	£	£	£	£
Railways and tramways	127,563,128	69,455,840	57,345,178	28,728,256	21,783,347	6,922,406	311,798,155
Telegraphs and telephones	1,762,095	..	996,587	991,772	332,293	142,410	4,225,157
Water supply, sewerage and water conservation	44,850,388	22,195,034	6,806,822	18,659,361	7,817,254	..	100,328,859
Harbours, rivers, etc. Roads and bridges	26,520,750	10,209,550	5,020,661	9,808,929	5,785,713	6,129,297	63,474,900
Defence	1,457,536	149,323	363,085	291,615	..	128,224	2,389,783
Public buildings ..	8,924,315	4,917,029	3,403,116	2,423,367	1,292,332	1,601,296	22,561,955
Immigration.. ..	748,501	20,000	2,763,071	..	472,858	235,000	4,239,430
Development of mines, etc.	..	520,421	..	..	2,208,096	..	2,728,517
Land purchases for settlement	7,391,767	33,767,104	2,979,339	1,784,327	324,662	2,716,875	80,472,047
Advances to settlers ..	636,079			14,960,461	15,400,682	510,751	
Loans to local bodies ..	..	1,827,664	4,361,582	3,768,747	69,150	1,489,204	11,516,347
Rabbit-proof fences ..	322,933	507,824	399,053	223,495	328,703	..	1,782,008
Other public works and purposes	9,850,150	16,630,141	11,420,236	3,693,623	9,271,683	4,923,704	55,789,537
Total	230,027,642	160,199,930	95,858,730	85,334,453	65,086,773	24,799,167	661,306,695

The figures in the table show the amounts actually spent, and differ from those given later in the statements relating to the public debt, which represent the amount of loans still unpaid. The statement above includes all expenditure, whether the loans have been repaid or are still in existence. In the public debt statement, however, loans repaid are not included, and in the case of loans still outstanding, each is shown according to the amount repayable at maturity, and not according to the amount originally available for expenditure.

(ii) *Relative Importance of Items.* The relative importance of the various items of loan expenditure is indicated in the following table, which gives the percentage of each loan on the total loan expenditure in each State and for the States as a whole to 30th June, 1927 :—

TOTAL STATE LOAN EXPENDITURE TO 30th JUNE, 1927.—PERCENTAGES OF ITEMS.

Heads of Expenditure.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	%	%	%	%	%	%	%
Railways and tramways	55.46	43.36	59.82	33.67	33.47	27.91	47.15
Telegraphs and telephones	0.77	..	1.04	1.16	0.51	0.57	0.64
Water supply, sewerage and water conservation	19.50	13.86	7.10	21.87	12.01	..	15.17
Harbours, rivers, etc. Roads and bridges	11.53	6.37	5.24	11.49	8.89	24.72	9.60
Defence	0.63	0.09	0.38	0.34	..	0.52	0.36
Public buildings ..	3.88	3.07	3.55	2.84	1.99	6.46	3.41
Immigration	0.32	0.01	2.88	..	0.73	0.95	0.64
Development of mines, etc.	..	0.32	..	..	3.39	..	0.41
Land purchases for settlement	3.21	21.08	3.11	2.09	0.50	10.96	12.17
Advances to settlers ..	0.28			17.53	23.66	2.06	
Loans to local bodies ..	..	1.14	4.55	4.42	0.11	6.00	1.74
Rabbit-proof fences ..	0.14	0.32	0.42	0.26	0.50	..	0.27
Other public works and purposes	4.28	10.38	11.91	4.33	14.24	19.85	8.44
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Division II.—State Public Debts.

1. **General.**—The first government loan raised in Australia was obtained by New South Wales in 1842. This and nine other loans prior to 1855 were all procured locally. In the last-mentioned year, Australia approached the London market, the occasion being the placing of the first instalment of the New South Wales 5 per cent. loan for £683,300. Victoria first appeared as a borrower in 1854, and made its first appearance on the London market in 1859. In the other States the first public loans were raised in the following years:—Queensland 1861, South Australia 1856, Western Australia 1845, and Tasmania 1867.

2. **State Debts, 1923 to 1927.**—The table hereunder shows the State public debts and the amounts owing per head of population at the 30th June in each year from 1923 to 1927 inclusive. The totals include sums advanced by the Commonwealth to the States for settling returned soldiers on the land, and for this reason they differ in some cases from those given in previous issues. On the transfer of the Queensland State Savings Bank business to the Commonwealth Bank in 1920, Queensland Government securities were handed to the latter for the Savings Bank current account credit balance and for amounts owing on account of Advances to Settlers and Workers' Dwellings. This transaction added a total of £5,936,916 to the Public Debt without involving any additional borrowing. Repayments reduced this amount at 30th June, 1927, to £4,044,734.

STATE PUBLIC DEBTS, 30th JUNE, 1923 TO 1927.

TOTAL.

Date.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
	£	£	£	£	£	£	£
30th June, 1923..	197,936,092	118,562,029	88,005,001	65,451,873	58,485,555	22,438,091	550,878,641
„ 1924..	224,179,515	120,946,326	90,560,900	70,016,829	62,765,782	23,732,685	592,202,037
„ 1925..	215,331,110	128,445,565	96,389,067	74,780,835	64,493,261	23,894,416	603,334,254
„ 1926..	223,504,771	138,754,989	102,316,866	81,473,624	70,806,921	24,477,590	641,334,761
„ 1927..	240,781,363	146,404,530	105,734,916	90,284,162	71,501,913	24,516,688	679,223,572

PER HEAD OF POPULATION.

Date.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	All States.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
30th June, 1923..	90 5 6	73 15 0	109 4 9	125 15 9	168 0 1	104 19 2	96 16 11
„ 1924..	100 10 3	73 15 3	109 8 9	132 7 10	174 3 7	111 6 4	102 3 6
„ 1925..	94 15 7	76 17 6	112 14 2	137 13 9	175 4 10	112 15 2	101 18 2
„ 1926..	96 8 8	81 17 9	116 7 0	145 17 9	188 14 9	116 18 2	106 5 10
„ 1927..	101 6 7	81 11 3	116 5 9	155 1 9	162 11 3	111 8 7	107 2 4

The greatest increase in indebtedness was experienced in New South Wales, which added £42,845,271 during the period under review. The public debt of the whole of the States increased during the same period by £128,344,931, or at the rate of £32,000,000 per annum.

The amount of States Public Debt at 30th June, 1927, which it is proposed shall be taken over by the Commonwealth Government in the terms of the Financial Agreement referred to in Division B., Section I. 3 *ante*, is £672,120,415. This figure is reconciled with the total shown in this paragraph, as follows :—

	£	£
Gross Public Debt of States at 30th June, 1927		679,223,572
Deduct—		
Amount to be written off Soldier Settlement Loans to States on ratification of agreement	5,000,000	
Balance of Northern Territory Loans and Port Augusta–Oodnadatta Railway Loans taken over from South Australia	2,103,157	
		7,103,157
Total States Debts at 30th June, 1927, to be taken over ..		£672,120,415

3. **Place of Flotation of Loans.**—(i) *For each State.* As pointed out previously, the yearly loans, usually for comparatively small amounts, were raised locally, but, with the increasing demand for loan funds and the more favourable terms offering in the London market, the practice of raising loans in London came into vogue, and for many years local flotations, except for short terms or small amounts, were comparatively infrequent. In more recent years, however, the accumulating stocks of money in Australia seeking investment have led to the placing of various redemption and other loans locally, with very satisfactory results. Moreover, certain loans have been placed in New York on account of all States. The following table gives particulars of loans outstanding on the 30th June, 1927, which had been floated abroad and in Australia respectively :—

STATE PUBLIC DEBTS.—PLACE OF FLOTATION OF LOANS, 30th JUNE, 1927.

State.	Floated Abroad.		Floated in Australia.		Gross Public Debt.
	Amount.	Percentage on Total Debt.	Amount.	Percentage on Total Debt.	
	£	%	£	%	£
New South Wales ..	(*a*)154,941,841	64.35	85,839,522	35.65	240,781,363
Victoria	(*b*) 54,729,137	37.38	91,675,393	62.62	146,404,530
Queensland	(*c*) 65,930,133	62.35	39,804,783	37.65	105,734,916
South Australia ..	(*d*) 36,712,220	40.66	53,571,942	59.34	90,284,162
Western Australia ..	(*e*) 49,309,312	68.96	22,192,601	31 04	71,501,913
Tasmania	13,290,550	54.21	11,226,138	45.79	24,516,688
Total ..	(*f*)374,913,193	55.20	304,310,379	44.80	679,223,572

(*a*) Including £10,273,972, floated in New York.
(*b*) Including £1,926,436, floated in New York.
(*c*) Including £5,291,277, floated in New York.
(*d*) Including £770,574, floated in New York.
(*e*) Including £1,541,149, floated in New York.
(*f*) Including £19,803,408, floated in New York.

(ii) *Total, All States.* The next table shows particulars of the aggregate State indebtedness at the end of the years 1922–23 to 1926–27.

STATE PUBLIC DEBTS.—PLACE OF FLOTATION OF LOANS, 30th JUNE, 1923 TO 1927.

Year.	Floated Abroad.		Floated in Australia.		Total Public Debt.
	Amount.	Percentage on Total Debt.	Amount.	Percentage on Total Debt.	
	£	%	£	%	£
30th June, 1923 ..	309,216,201	56.13	241,662,440	43.87	550,878,641
" 1924 ..	339 498,422	57.33	252,703,615	42.67	592,202,037
" 1925 ..	336.866,567	55.83	266,467,687	44.17	603,334,254
" 1926 ..	359,224,734	56.01	282,110,027	43.99	641,334,761
" 1927 ..	374,913,193	55.20	304,310,379	44.80	679,223,572

In the course of four years the oversea indebtedness of the States has increased by £65,696,992, while the local indebtedness has increased by £62,647,939. In other words, the Australian proportion had on 30th June, 1927, grown to more than three-sevenths.

The total indebtedness of the States increased during the year 1926–27 by £37,888,811, and is accounted for chiefly by a loan of £10,000,000 floated in New York by the New South Wales Government and by loans from the Commonwealth Government, which has either advanced money to the States, or acted as agent in obtaining loans from London and New York. The sums raised have been largely spent in settling returned soldiers on the land, in constructing silos for wheat storage, and in providing employment through the medium of local bodies.

4. **Rates of Interest.**—(i) *At 30th June, 1927.* As mentioned previously, the highest rate of interest paid for the earliest State loans was fivepence farthing per £100 per diem, or, approximately, 8 per cent. per annum. At present the rates vary from 7¼ per cent. to 1 per cent., no fewer than twenty-eight separate rates being involved. It is probable however, that the debt at the higher rates will largely increase in the future, since conversion can scarcely be effected at present at a lower rate of interest than 5 per cent. The average rate payable on the aggregate indebtedness is more than 4⅞ per cent. For the separate States the average varies considerably, being lowest in the case of Western Australia and highest in that of South Australia, the difference between these two average rates being slightly less than ½ per cent. The table hereunder gives particulars of the rates of interest payable at the 30th June, 1927 :—

STATE PUBLIC DEBTS.—RATES OF INTEREST PAYABLE, 30th JUNE, 1927.

Rate of Interest.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
%	£	£	£	£	£	£	£
7¼ ..	2,311,068	565,814	769,222	513,564	1,380,000	268,649	6,808,317
7 ..	..	..	2,465,838	..	..	..	2,465,838
£6/15/2 ..	1,250,000	613,248	10,742	..	477,802	..	2,351,792
£6/14/– ..	..	..	67,026	..	500,000	19,280	586,306
6½ ..	6,500,000	..	3,100,690	3,000,000	250,000	3,386,965	16,237,655
£6/7/– ..	4,535,099	5,480,743	1,580,780	1,730,158	1,939,883	900,000	16,166,663
6¼ ..	..	..	..	..	..	900	900
£6/2/2 ..	..	..	362,000	..	..	..	362,000
£6/1/3 ..	..	..	386,000	..	..	..	386,000
6 ..	19,173,016	5,897,624	6,530,265	16,324,992	6,762,298	1,599,662	56,287,857
5¾ ..	19,112,211	..	..	..	1,500,000	..	20,612,211
£5/13/2 ..	..	..	..	28,796	..	..	28,796
5½ ..	43,333,664	24,925,012	15,546,844	10,568,628	4,865,675	2,346,260	101,586,083
5⅜ ..	..	200,000	..	..	..	..	200,000
£5/6/11 ..	2,124,411	3,553,124	501,241	522,283	1,045,559	600,000	8,346,618
£5/5/3 ..	85,405	1,581,146	309,730	67,000	87,958	341,635	2,472,874
5¼ ..	31,782,593	17,840,836	7,928,990	14,336,584	2,499,178	1,691,387	76,079,568
5⅛ ..	..	140,000	..	..	..	..	140,000
5 ..	44,975,849	49,375,600	24,974,583	19,830,915	14,983,725	3,306,494	157,447,166
4⅞ ..	..	200,000	..	..	..	..	200,000
4¾ ..	..	6,535,980	..	1,500,000	..	..	8,035,980
4½ ..	12,295,900	1,513,567	5,713,962	321,650	6,473,948	325,980	26,645,007
4¼ ..	..	..	..	..	..	140,750	140,750
4 ..	20,745,289	5,205,785	12,726,494	7,455,357	9,552,118	4,342,036	60,027,079
3¾ ..	1,911,650	220,000	2,025,300	3,393,955	1,000,000	..	8,550,905
3½ ..	14,018,456	12,618,136	15,245,826	5,566,910	11,045,185	4,796,690	63,291,503
3 ..	16,626,752	9,635,611	5,489,383	5,123,370	4,850,000	450,000	42,175,116
1 ..	..	302,004	..	..	2,288,584	..	2,590,588
Total ..	240,781,363	146,404,530	105,734,916	90,284,162	71,501,913	24,516,688	679,223,572
Average rate	£5/0/3	£4/18/1	£4/16/0	£5/0/6	£4/11/6	£4/18/2	£4/18/2

(ii) *All States, 1923 to 1927.* The rapid increase recently in the amounts bearing interest at the higher rates is exhibited in the table hereunder, which shows the aggregate amount of indebtedness at the several rates of interest at the 30th June in each of the years 1923 to 1927 :—

STATE PUBLIC DEBTS.—RATES OF INTEREST PAYABLE, 30th JUNE, 1923 TO 1927.

Rate of Interest.	30th June, 1923.	30th June, 1924.	30th June, 1925.	30th June, 1926.	30th June, 1927.
%	£	£	£	£	£
7½	144,015	144,015	..	..	..
7¼	5,790,670	5,890,671	5,828,917	5,808,317	5,808,317
7	2,466,091	2,466,091	2,466,091	2,465,838	2,465,838
£6/15/2	2,369,792	2,369,792	2,369,792	2,351,792	2,351,792
£6/14/-	..	519,280	610,925	593,979	586,306
6½	16,306,663	16,317,190	16,287,355	16,284,855	16,237,655
£6/7/-	16,209,463	16,209,463	16,209,463	16,166,663	16,166,663
6¼	5,696,341	266,430	164,644	116,804	900
£6/3/6	..	..	502,000	502,000	..
£6/2/2	..	..	362,000	362,000	362,000
£6/1/3	..	..	386,000	386,000	386,000
6	29,807,617	33,475,342	54,977,437	56,922,714	56,287,857
5¾	32,539,261	30,677,685	28,164,742	27,424,452	20,612,211
£5/13/2	28,796	28,796	28,796	28,796	28,796
5½	66,573,879	80,310,921	92,708,890	112,814,049	101,586,083
5⅜	..	..	..	200,000	200,000
£5/6/11	8,357,218	8,357,218	8,357,218	8,346,618	8,346,618
£5/5/3	2,980,759	2,472,947	2,472,874	2,472,874	2,472,874
5¼	24,082,463	16,230,527	15,967,072	30,465,322	76,079,568
5⅛	..	..	..	..	140,000
5	38,526,496	91,632,861	111,693,813	137,150,908	157,447,166
4⅞	1,050,000	350,000	100,000	200,000	200,000
4¾	2,406,010	1,335,980	6,585,980	6,835,980	8,035,980
£4/14/5	18,000,000	18,106,000	18,237,931	..	..
£4/14/3	398	..	..	..	..
4½	38,823,200	44,921,339	31,458,870	32,459,186	26,645,007
4¼	874,410	874,410	778,150	178,150	140,750
4⅛	..	..	..	..	..
4	77,444,696	69,731,637	60,868,665	60,559,695	60,027,079
3¾	11,583,660	10,027,900	9,786,705	9,053,530	8,550,905
3½	102,811,575	93,081,666	70,393,496	64,027,001	63,291,503
3	46,005,168	46,403,876	45,566,428	44,677,065	42,175,116
1	..	..	..	2,480,173	2,590,588
Total	550,878,641	592,202,037	603,334,254	641,334,761	679,223,572
Average rate	£4/13/0	£4/14/4	£4/16/11	£4/17/0	£4/18/2

The increase in the average rate started in 1912, but was accelerated by the war, which has virtually made 5 per cent. the present minimum rate of interest for gilt-edged securities. The average rate is likely to rise for some time, since many of the securities falling due in the near future will have to be renewed at a higher rate of interest than they are at present bearing.

5. Interest per Head.—The relative burden of the State debts in respect of interest will be seen from the following table, which gives for the 30th June, 1927, the amount of interest payable on the public debt outstanding at that date, and the corresponding amount per head of population :—

STATE PUBLIC DEBTS.—INTEREST PAYABLE, 30th JUNE, 1927.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	All States.
	£	£	£	£	£	£	£
Total annual interest payable—							
Abroad	7,483,643	2,518,358	3,132,681	1,709,227	2,040,416	584,147	17,468,472
In Australia	4,588,495	4,671,905	1,943,761	2,828,830	1,231,253	618,898	15,883,142
Total	12,072,138	7,190,263	5,076,442	4,538,057	3,271,669	1,203,045	33,351,614
Annual interest payable per head	£5/1/10	£4/3/4	£5/13/6	£7/19/0	£8/9/11	£5/15/7	£5/8/2

6. Dates of Maturity.—Securities like the British Consols are interminable, but Australian debts have in most cases a fixed date for repayment, there being a few exceptions which are included in the following table under the headings "interminable," "interminable at Government option," and "date not fixed." Those "interminable at

Government option " include amounts which are payable by the respective Governments after giving a specified notice, and those "date not fixed" consist of certain amounts owing to the Commonwealth Government. In most cases at date of maturity renewal is effected in respect of the greater portion of the loan, as provision for redemption has been made in exceptional cases only. In order to avoid application to the market at an unfavourable time, several States have adopted the practice of specifying a period prior to the date of maturity within which the Government, on giving twelve, or in some cases six months' notice, has the option of redeeming the loan. The Government can, therefore, take advantage of opportunities that may offer during the period for favourable renewals. Particulars concerning the due dates of the State loans outstanding on the 30th June, 1927, are given in the following table.

Those loans in the case of which the Government has the option of redemption during a specified period have been in each instance classified according to the latest date of maturity.

While the latest dates of maturity of the various loans extend over the period 1927 to 1975, the average for the States as a whole is slightly less than 16 years.

STATE PUBLIC DEBTS.—DUE DATE OF AMOUNT OUTSTANDING ON 30th JUNE, 1927.

Year of Maturity.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	£	£	£	£	£	£	£
Overdue ..	53,142	..	..	32,013	..	..	85,155
1927	402,700	3,442,612	..	2,535,869	372,335	660,293	7,413,809
1928	1,165,611	13,460,885	1,348,800	2,414,919	1,344,599	1,522,569	21,257,383
1929	1,770,490	17,977,676	12,862,434	6,857,497	887,079	1,794,304	42,149,480
1930	15,452,469	13,123,115	5,649,510	7,740,154	1,114,942	1,981,289	45,061,479
1931	4,594,088	5,271,027	473,220	2,008,824	3,845,409	471,404	16,663,972
1932	14,604,330	3,361,614	..	2,165,686	1,212,617	160,254	21,504,501
1933	17,838,922	1,535,960	1,198,000	4,350,612	1,591,879	519,130	27,034,503
1934	14,347,823	8,092,675	3,397,800	4,266,187	2,012,347	72,639	32,189,471
1935	23,444,726	1,235,900	397,270	6,667,321	8,830,485	272,210	40,847,912
1936	1,393,697	3,650,856	4,162,120	5,672,565	1,785,630	99,570	16,764,438
1937	357,920	40,000	..	1,327,479	..	4,052	1,729,451
1938	84,450	483,000	2,830,177	1,085,115	1,914,250	43,000	6,439,992
1939	2,900	312	..	2,734,050	106,603	..	2,843,865
1940	16,506,000	4,248,900	2,000,000	6,014,861	4,500,000	7,810,022	41,079,783
1941	7,882,768	1,996,050	3,880,438	2,269,703	292,680	246,855	16,568,494
1942	9,963,311	14,485,100	15,000	7,912,548	61,697	1,179,369	33,617,025
1943	765,700	780,900	998,200	2,268,454	1,346,700	128,700	6,288,654
1944	252,900	400	..	..	..	..	253,300
1945	11,006,000	1,856,943	7,623,586	798,812	5,906,026	200,000	27,391,367
1946	..	217,400	..	..	..	250,000	467,400
1947	3,200	..	6,553,558	..	2,260,000	..	8,816,758
1948	6,500	..	..	..	..	..	6,500
1949	2,900	11,699,371	..	..	..	42,000	11,744,271
1950	22,061,783	11,880,777	10,047,183	2,861,801	5,431.202	4.929,564	57,212,310
1951	..	..	999,600	..	..	..	999,600
1952	3,100	..	125,400	..	..	..	128,500
1953	6,500	..	2,147,809	..	..	..	2,154,309
1954	2,900	123,874	..	..	..	..	126,774
1955	22,001,500	1,926,436	770,574	770,574	5,978,149	..	31,447,233
1957	16,132,086	..	..	..	..	..	16,132,086
1958	5,136,986	..	..	..	..	..	5,136,986
1960	..	8,979,700	20,228,800	2,989,616	1,000,000	..	33,198,116
1962	10,500,000	..	..	..	6,000,000	..	16,500,000
1964	..	..	..	..	1,566,000	..	1,566,000
1965	14,500,000	..	..	..	3,000,000	..	17,500,000
1970	..	..	2,000,000	..	..	..	2,000,000
1975	605,864	9,899,352	4,322,639	8,457,700	8,840,484	1,396,300	33,522,339
Interminable ..	532,889	..	1,109,000	98,382	..	..	1,740,271
Interminable at Government option	7,395,208	6,337,356	..	5,123,370	..	..	18,855,934
Annual Drawings	..	..	71,132	..	10,800	..	81,932
Half-yearly ,,	..	..	10,522,666	..	..	733,164	11,255,830
Date not fixed ..	..	296,339	..	860,050	290,000	..	1,446,389
Total ..	240,781,363	146,404,530	105,734,916	90,284.162	71,501,913	24.516,688	679 223,572
Average period to maturity, years	15.13	13.96	19.25	13.65	21.47	14.11	15.95

7. Sinking Funds.—The practice of providing sinking funds has been consistently adopted in the case of Western Australia only. This State has established, in connexion with each of its loans, sinking funds varying from 1 per cent. to 3 per cent. per annum of the nominal amount of the loan. The funds are placed with trustees in London, by whom they are invested in securities, and applied from time to time to the redemption of loans falling due. In the other States the sinking fund provision made is varied, consisting in certain instances of the revenues from specified sources, in others of the Consolidated Revenue Fund surplus, and in others again of fixed annual amounts. The following table gives the sinking funds and net indebtedness of each State at the 30th June, 1927 :—

STATE SINKING FUNDS AND NET INDEBTEDNESS, 30th JUNE, 1927.

State.	Gross Indebtedness.	Sinking Fund.	Net Indebtedness.	Net Indebtedness per Head.		
	£	£	£	£	s.	d.
New South Wales ..	240,781,363	564,857	240,216,506	101	6	7
Victoria	146,404,530	5,591,726	140,812,804	81	11	3
Queensland.. ..	105,734,916	1,721,422	104,013,494	116	5	9
South Australia ..	90,284,162	1,744,010	88,540,152	155	1	9
Western Australia ..	71,501,913	8,908,806	62,593,107	162	11	3
Tasmania	24,516,688	1,319,874	23,196,814	111	8	7
Total ..	679,223,572	19,850,695	659,372,877	107	2	4

C. COMMONWEALTH AND STATE PUBLIC DEBTS.

The table hereunder, showing the public debts of the Commonwealth and the States, contains a column headed " deduction for debts counted twice." For each year this includes certain advances made by the Commonwealth to the States.

COMMONWEALTH AND STATE PUBLIC DEBTS, 1922–23 TO 1926–27.

Year ended 30th June.	Public Debt of Commonwealth.	Public Debt of States.	Aggregate.	Deduction for Debts Counted Twice.	Balance, *i.e.*, Public Debt of Australia.	Public Debt per Capita.		
	£	£	£	£	£	£	s.	d.
1923..	410,996,316	550,878,641	961,874,957	56,390,011	905,484,946	159	3	9
1924..	415,600,099	592 202,037	1,007 802,136	55,953,000	951 819,136	164	0	3
1925..	430,948,062	603,334,254	1,034 282,316	71,135 472	963 146,844	162	8	10
1926..	458 443,351	641,334,761	1,099,778,112	85,777,469	1,014,000,643	167	9	8
1927..	461,067,742	679,223,572	1,140 291,314	96,559 393	1,043,731,921	169	4	8

D. THE AUSTRALIAN LOAN COUNCIL.

The Australian Loan Council, consisting of the Treasurers of the Commonwealth and of the States, was created as the result of representations made by the Commonwealth Government, and has for its object the prevention of undue competition and clashing in the raising of loans.

At its first meeting, held on 1st February, 1924, the Loan Council recognized the necessity for co-operation in the raising of loans. The terms to be offered by the several governments for loans in Australia up to 30th June, 1924, were agreed to, and arrangements were made to prevent unnecessary clashing during the period required by the Commonwealth for the flotation of its War Gratuity Redemption and Conversion Loan.

The loan operations of the Commonwealth and States in 1924–25 were conducted in accordance with the plans adopted by the Council. The Council, acting as a central borrowing authority, issued two loans in Australia on behalf of the States—one for £10,300,000 of new money for State Public Works, and one for the conversion or redemption of £4,909,850 of maturing State securities.

The chief problem confronting the Council in 1925–26 was the conversion of £67,000,000 of Commonwealth War Loan maturing on 15th December, 1925. It was agreed that no other borrowing should be undertaken in Australia during the period required for this conversion. This transaction was successfully carried out at a rate of 5½ per cent. Subsequent loans have been raised in Australia at 5¼ per cent., which rate seems well established.

Up to June, 1925, the Commonwealth and States issued their own loans in London and elsewhere outside Australia, but the amounts were limited to sums agreed upon at the Loan Council by the several Treasurers. About the middle of 1925, however, the Loan Council decided that there should be no competition for loans in the American market, and that borrowing in America, and borrowing simultaneously in America and London, on behalf of the Commonwealth and the States, should be conducted solely by the Commonwealth. The successful flotation in July, 1925, of a loan of £20,000,000 in London and New York was regarded as proof of the soundness of the Council's new policy.

Until July, 1925, the Council consisted of the Treasurers of the Commonwealth and of each of the States; in August of that year the Treasurer of New South Wales withdrew from the Council, but subsequently rejoined at the end of 1927.

E. PRIVATE FINANCE.

§ 1. Coinage.

1. **Australian Mints.**—(i) *General.* Soon after the discovery of gold in Australia steps were taken for the establishment of a branch of the Royal Mint in Sydney. The formal opening took place on the 14th May, 1855. The Melbourne branch was opened on the 12th June, 1872, and the Perth branch on the 20th June, 1899. The States of New South Wales, Victoria, and Western Australia provide an annual endowment in return for which the mint receipts are paid into the respective State Treasuries, and it might be said until recently that, apart from expenditure on buildings, new machinery, etc., the accounts paid into the Treasuries fairly balanced the mint subsidies. Early in 1923, however, it was announced that owing to losses incurred in the operations of recent years, the New South Wales Government had decided to close the Sydney branch at the end of 1923. This decision was, however, not carried out at that time, but the mint was closed at the end of 1926.

(ii) *Gold Receipts and Issues in 1927.* (*a*) *Assay of Deposits Received.* The deposits received during 1927 at the Melbourne Mint reached a gross weight of 266,836 ozs., and at the Perth Mint, a gross weight of 494,294 ozs. The average composition of these deposits was—Melbourne, gold 928.5, silver 33.5, base 38.0, in every 1,000 parts; and Perth, gold 825.0, silver 108.4, base 66.6, in every 1,000 parts.

(*b*) *Issues.* The Australian mints, besides issuing gold coin in the shape of sovereigns and half-sovereigns, also issue gold bullion, partly for the use of local manufacturers (jewellers and dentists), and partly for export, India taking a considerable quantity of gold cast into 10-oz. bars. During recent years the export was subject to regulation by the Commonwealth Government, but the embargo was lifted in 1925. The issues during 1927 are shown in the table below :—

AUSTRALIAN MINTS.—ISSUES OF GOLD, 1927.

Mint.	Coin.			Bullion.	Total.
	Sovereigns.	Half-sovereigns.	Total.		
	£	£	£	£	£
Melbourne ..	310,156	..	310,156	1,014,137	1,324,293
Perth ..	1,383,544	..	1,383,544	353,252	1,736,796
Total ..	1,693,700	..	1,693,700	1,367,389	3,061,089

(c) *Withdrawals of Worn Coin.* The mints receive light and worn coin for recoinage. The total withdrawals of worn gold coin were as follows :—Sydney (to 1926), £1,110,867 ; Melbourne, £866,145 (since and including 1890) ; and Perth, £1,401.

(iii) *Total Gold Receipts and Issues.* (a) *Receipts.* The total quantities of gold received at the three mints since their establishment are stated in the gross as follows :—Sydney (to 1926), 42,082,927.85 ozs.; Melbourne, 41,054,783 ozs.; and Perth, 31,762,990 ozs. As the mints pay for standard gold (22 carats) at the rate of £3 17s. 10½d. per oz., which corresponds to a value of £4 4s. 11$\frac{5}{11}$d. per oz. fine (24 carats), it is possible to arrive at an estimate of the number of fine ounces from the amounts paid for the gold received. These amounts were :—Sydney (to 1926), £156,771,141 ; Melbourne, £160,936,548 ; Perth, £101,469,595 ; corresponding to—Sydney (to 1926), 36,907,045 ozs. fine ; Melbourne, 37,887,685 ozs. fine ; and Perth, 26,006,754 ozs. fine. In the case of deposits containing over a certain minimum of silver, the excess is paid for at the rate fixed from time to time by the Deputy-Master of the branch mint concerned.

(b) *Issues.* The total values of gold coin and bullion issued by the three mints are shown in the table hereunder. It may be said that about four-sevenths of the total gold production of Australasia has passed through the three Australian mints, the production of Australia to the end of 1927 being valued at £626,000,000, and that of New Zealand at approximately £92,000,000, or a total of about £718,000,000.

AUSTRALIAN MINTS.—TOTAL ISSUES OF GOLD TO END OF 1927.

Mint.	Coin.			Bullion.	Total.
	Sovereigns.	Half-sovereigns.	Total.		
	£	£	£	£	£
Sydney (to 1926)	144,435,550	4,781,000	149,216,550	7,574,408	156,790,958
Melbourne ..	146,297,878	946,780	147,244,658	13,686,744	160,931,402
Perth ..	100,355,235	367,338	100,722,573	9,726,337	110,448,910
Total ..	391,088,663	6,095,118	397,183,781	30,987,489	428,171,270

(iv) *Silver and Bronze Coinage.* (a) *Prices of Silver.* The value of silver has greatly decreased since its demonetization and restricted coinage in almost the whole of Europe. A noticeable increase, however, took place for some years after 1915, the price of silver following the general trend of world prices. Its average price in the London market in recent years is shown in the table in Chapter XXI. Mineral Industry.

(b) *Profits on Coinage of Silver.* As sixty-six shillings are coined out of one pound troy of standard silver, the silver required to produce £3 6s. of coin cost, at the average 1927 London market price of 2s. 2d. per ounce, approximately £1 6s. The difference nearly represents, therefore, the gross profit or seigniorage made on the coinage of every £3 6s. Negotiations for the coinage of silver and bronze coin in Australia took place for a number of years between the Imperial authorities and the Governments of New South Wales and Victoria, but no decision was arrived at. As section 51 of the Commonwealth Constitution makes legislation concerning "currency, coinage, and legal tender" a Federal matter, the question remained in abeyance until 1907, when the matter was discussed at the Colonial Conference, London, with the result that in the latter part of 1908 the Commonwealth Treasurer announced his intention of initiating the coinage. Since 1916 silver and bronze coins have been minted in Australia on behalf of the Commonwealth Treasury.

(c) *Silver and Bronze Issues.* The total issues of silver and bronze coinage on account of the Commonwealth since 1910 as obtained from returns furnished by the Treasury, are set out in the following table :—

AUSTRALIAN MINTS.—SILVER AND BRONZE ISSUES, 1910 TO 1927.

Year.	Silver.					Bronze.		
	2/-.	1/-.	6d.	3d.	Total.	1d.	½d.	Total.
	£	£	£	£	£	£	£	£
1910–18 ..	1,730,950	1,138,600	303,700	295,100	3,468,350	92,220	42,950	135,170
1919	98,600	48,900	28,500	37,725	213,725	29,204	9,930	39,134
1920	94,800	93,000	54,800	53,775	296,375	33,320	8,555	41,875
1921	118,300	58,400	72,500	82,900	332,100	30,779	10,525	41,304
1922	129,100	37,400	40,400	40,650	247,550	31,770	4,400	36,170
1923 (30th June)	50,850	35,900	13,100	7,000	106,850	9,650	370	10,020
1923–24 ..	146,200	58,800	25,400	29,250	259,650	30,650	4,560	35,210
1924–25 ..	150,000	16,800	25,900	34,150	226,850	20,000	420	20,420
1925–26 ..	409,000	121,700	108,200	77,850	716,750	1,710	6,175	7,885
1926–27 ..	394,800	76,600	99,500	69,700	640,600	6,750	5,150	11,900
Total ..	3,322,600	1,686,100	772,000	728,100	6,508,800	286,053	93,035	379,088

(d) *Withdrawals of Worn Silver Coin.* The value of worn silver coins received during 1927 was as follows :—Melbourne, £123,520 ; Perth, £8,000. The total withdrawals of worn silver coin were :—Melbourne, £1,425,355 ; Perth, £112,538.

(v) *Standard Weight and Fineness of Coinage.* The coinage of Australia, so far as the coins minted are concerned, is the same as that of the United Kingdom, and the same provisions as to legal tender apply, viz., gold coins are legal tender to any amount, silver for an amount not exceeding forty shillings, and bronze up to one shilling. As will be seen from the table below, the standard weights of the sovereign and half-sovereign are respectively 123.27447 grains and 61.63723 grains, but these coins will pass current if they do not fall below 122.5 grains and 61.125 grains respectively.

AUSTRALIAN COINAGE—STANDARD WEIGHT AND FINENESS.

Denomination.	Standard Weights.	Standard Fineness.
	Grains.	
GOLD—		Eleven-twelfths fine gold, viz.— Gold .. 0.91667 Alloy .. 0.08333 1.00000
Sovereign ..	123.27447	
Half-sovereign ..	61.63723	
SILVER—		Thirty-seven-fortieths fine silver, viz. :— Silver .. 0.925 Alloy .. 0.075 1.000(a)
Florin	174.54545	
Shilling ..	87.27272	
Sixpence ..	43.63636	
Threepence ..	21.81818	
BRONZE—		Mixed metal, viz. :— Copper .. 0.95 Tin .. 0.04 Zinc .. 0.01 1.00
Penny ..	145.83333	
Halfpenny ..	87.50000	

(a) The fineness of Australian silver coins is still 925, but since December, 1920, the fineness of British silver coins has been reduced to 500.

§ 2. Cheque-Paying Banks.

1. **Banking Legislation.**—(i) *Commonwealth Legislation.* Under Section 51 of the Commonwealth Constitution Act the Commonwealth Parliament has power to legislate with respect to "Banking, other than State banking, also State banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money." Legislation under this authority comprises the following Acts : No. 27 of 1909, dealing with Bills of Exchange, Cheques, and Promissory Notes ; No. 11 of 1910, dealing with Australian Notes ; and No. 14 of 1910, a Bank Notes Tax Act. The Notes Act and the Bank Notes Tax Act were supplemented in the following year by the passing of No. 18

of 1911, "An Act to provide for a Commonwealth Bank," which passed both Houses and was assented to on 22nd December, 1911. Some account of the foundation of the Bank appeared in No. 6 to No. 10 issues of the Official Year Book.

As the initial expenses of the bank were heavy, the early operations resulted in a small loss, but with the increasing prosperity of the institution the early deficit was gradually reduced, until on 30th June, 1915, it was entirely extinguished. The following table shows the aggregate net profits from the initiation of the bank to the end of each of the last five financial years :—

COMMONWEALTH BANK.—AGGREGATE PROFITS, 1923 TO 1927.

Date.	Aggregate Net Profit to Date.		
	General Bank.	Savings Bank.	Total.
	£	£	£
30th June, 1923	3,869,219	534,768	4,403,987
,, 1924	3,964,620	690,053	4,654,673
,, 1925	4,098,392	890,838	4,989,230
,, 1926	4,309,787	1,140,740	5,450,527
,, 1927	4,585,181	1,446,333	6,031,514

In accordance with the provisions of section 30 of the Bank Act and section 9 (2) of the National Debt Sinking Fund Act, half of the net profits of the Bank have been placed to the credit of the Bank's Reserve Fund and half to the credit of the National Debt Sinking Fund. Up to 30th June, 1927, the latter fund has benefited to the extent of £654,605.

The Commonwealth Bank Act, 1924 was assented to on 20th August, 1924, and was brought into operation on 10th October, 1924. This Act was passed to broaden the scope of the Commonwealth Bank and to enable it to perform the functions for which it had been established. Five main amendments to the Bank Act 1911–20 are included, in accordance with which the following changes have been made :—(1.) A Board of Directors has been appointed to control not only the general business, but also that of the note issue. The Board consists of the Governor of the Bank, the Secretary to the Treasury, and six others who are or have been actively engaged in agriculture, commerce, finance or industry. In addition to the above Board there is a Board of Advice in London. (2.) The bank has been strengthened by the capitalization of £4,000,000 of the accumulated profits, and the Treasurer is authorized to raise by loans sums aggregating £6,000,000 and to lend the proceeds to the Commonwealth Bank as additional capital. The Ministry does not propose to interfere with the authority already included in the Commonwealth Bank Act to issue debentures up to £10,000,000. (3.) The Board is to fix and publish its discount rate. (4.) The associated banks settle their exchanges through the Commonwealth Bank. (5.) The associated banks supply to the Treasurer each quarter a statement of average weekly liabilities and assets in accordance with the schedule prescribed.

Since the 1st July, 1927, the Bank has published a weekly Statement of the accounts of the note issue and general banking departments of the Bank.

(ii) *State Legislation.* The Acts under which the various banks are incorporated differ somewhat. While most of the older banks were incorporated by special Act or Charter, *e.g.*, the Bank of New South Wales, by Act of Council 1817 ; the Bank of Australasia, by Royal Charter ; the Bank of Adelaide, by Act of the South Australian Parliament ; and the Bank of New Zealand, by Act of the General Assembly of New Zealand, the newer banks are generally registered under a "Companies Act," or some equivalent Act. This is also the case with those banks which, after the crisis of 1893, were reconstructed.

(iii) *Australian Note Issue.* In December, 1920, the Australian Note Issue was handed over to the control of the Commonwealth Bank, the notes, however, still remaining Treasury Notes. The Note Issue Department of the Bank is administered by the above-mentioned Board of Directors. The notes in circulation on 27th June, 1927, amounted to £48,393,226, of which approximately 49 per cent. was held by the Banks and 51 per cent. by the public. Against this there was a reserve of gold coin and bullion amounting to £22,065,071, or 46 per cent., and other assets including investments of £26,368,155. The investments are set out in detail as follows :—

AUSTRALIAN NOTES ACCOUNT.—PARTICULARS OF INVESTMENTS AS AT 30th JUNE, 1927.

Investment.	Amount.	Rate of Interest.	Date of Maturity.	Annual Amount of Interest.
	£	%		£
Commonwealth Government Securities	38,745	5	15/12/27	1,937
	907,210	5¼	15/2/33	47,629
	500,000	5¼	15/2/38	26,250
	63,640	5½	15/12/41	3,500
	1,000,000	5¼	15/12/41	52,500
	505,750	5¼	15/2/43	26,551
	244,140	5	15/7/55	12,207
	3,014,716	3½	1/4/62 to 1/4/72	105,515
New South Wales Securities	2,400,000	5½	31/12/30	132,000
Victorian Securities	1,900,000	5½	1/2/29	104,500
	49,000	5¼	1/2/31	2,572
	583,000	5¼	1/4/34	30,608
Queensland Securities	1,490,000	5¼	1/4/34	78,225
South Australian Securities	1,600,000	5½	1/4/29	88,000
	326,000	5¼	1/4/34	17,115
Western Australian Securities ..	590,000	5½	1/1/31	32,450
	2,100,000	5½	1/4/31	115,500
	335,000	5¼	1/4/34	17,587
Tasmanian Securities	50,000	5½	1/10/30	2,750
	500,000	5½	31/12/30	27,500
	335,000	5	1932	16,750
United Kingdom Securities ..	1,731,520	£4/6/3 to £3/11/9	2/7/27 to 16/8/27	73,251
	785,221	3½	1/3/28	27,483
	1,655,000	5	1/4/28 to 15/5/30	82,750
	981 963	4½	15/4/30–32	44,188
	1,448,604	4	15/4/31–33	57,944
Total	(a) 25,134,509	..	..	1,227,262

(a) Exclusive of other assets amounting to £1,233,646.

2. **Banks in Operation.**—The nineteen banks trading in Australia at the 30th June, 1927, are arranged in the table hereafter according to the situation of their head offices. Where reference to the banks is made by name they will be dealt with in the order thus given, with the exception of the Commonwealth Bank, which is placed first :—

CHEQUE-PAYING BANKS AT 30th JUNE, 1927.

Bank.	Head Office.
Commonwealth Bank of Australia	Sydney
Joint Stock Banks—	
Bank of Australasia	London
Union Bank of Australia Limited	,,
English, Scottish, and Australian Bank Limited	,,
Bank of New South Wales	Sydney
Commercial Banking Company of Sydney Limited	,,
Australian Bank of Commerce Limited	,,
Primary Producers' Bank of Australia Limited	,,
National Bank of Australasia Limited	Melbourne
Commercial Bank of Australia Limited	,,
Ballarat Banking Company Limited	Ballarat
Queensland National Bank Limited	Brisbane
Queensland Deposit Bank Limited	,,
Federal Deposit Bank Limited	,,
Bank of Adelaide	Adelaide
State Bank of South Australia	,,
Bank of New Zealand	Wellington
Comptoir National d'Escompte de Paris	Paris
Yokohama Specie Bank Limited	Yokohama

Amalgamations, which have been such a feature in British banking of late years, have also been effected in Australia, the number of competitive joint-stock banks being thereby reduced considerably. During the calendar years 1917 and 1918 the following were recorded:—(*a*) the Royal Bank of Queensland Limited with Bank of North Queensland Limited; (*b*) City Bank of Sydney with Australian Bank of Commerce Limited; (*c*) National Bank of Tasmania Limited with Commercial Bank of Australia Limited; and (*d*) National Bank of Australasia Limited with Colonial Bank of Australasia Limited. A further amalgamation took place in August, 1920, viz., the London Bank of Australia Ltd. and the English, Scottish and Australian Bank Ltd., and these banks absorbed the Commercial Bank of Tasmania in May, 1921. The National Bank of Australasia also absorbed the Bank of Queensland. In 1927 further amalgamations were recorded, viz., the Bank of Victoria Ltd., with the Commercial Banking Company of Sydney Ltd.; the Western Australian Bank with the Bank of New South Wales, and the Royal Bank of Australia Ltd. with the English, Scottish, and Australian Bank Ltd.

3. **Capital Resources.**—The paid-up capital of the cheque-paying banks, together with their reserve funds, the rate per cent., and the amount of their last dividends, are shown in the table hereunder. The information relates to the balance-sheet last preceding the 30th June, 1927. In regard to the reserve funds it must be noted that in the case of some of the banks these are invested in Government securities, while in other cases they are used in the ordinary business of the banks, and in a few instances they are partly invested and partly used in business :—

CHEQUE-PAYING BANKS.—CAPITAL RESOURCES, 30th JUNE, 1927.

Bank.	Paid-up Capital.	Rate per cent. per annum of last Dividend and Bonus.	Amount of last Half-yearly Dividend and Bonus.	Amount of Reserved Profits.
	£	%	£	£
Commonwealth Bank of Australia ..	4,000,000	..	..	1,217,750
Joint Stock Banks—				
Bank of Australasia	4,000,000	14	300,000	3,945,508
Union Bank of Australia Ltd.	3,500,000	15	262,500	4,295,513
English, Scottish and Australian Bank Ltd.	2,625,000	12½	281,250 (*b*)	2,280,722
Bank of New South Wales	6,875,000	10	193,750 (*a*)	4,880,315
Commercial Banking Coy. of Sydney Ltd.	4,710,413	10	175,000	3,055,297
Australian Bank of Commerce Ltd. ..	2,194,240	8	73,600	845,303
Primary Producers' Bank of Australia Ltd.	419,866	..	..	2,895
National Bank of Australasia Ltd. ..	4,804,472	10	200,000	2,966,392
Commercial Bank of Australia Ltd. ..	3,299,050	4 Pref., 15 Ord.	106,039	1,066,141
Ballarat Banking Coy. Ltd.	127,500	8	5,100	73,116
Queensland National Bank Ltd. ..	1,500,000	10	37,500 (*a*)	761,649
Queensland Deposit Bank Ltd. ..	47,378	8	1,709	50,591
Federal Deposit Bank Ltd.	225,087	12	11,521	60,790
Bank of Adelaide	1,000,000	10	46,042	889,827
State Bank of South Australia	..	..	..	..
Total Australian Banks	39,328,006	..	1,694,011	26,391,809
Bank of New Zealand	6,637,239	10% "A" Pref., $13\frac{8}{11}$% "B" Pref., 14½% Ord.	771,814	3,609,656
Comptoir National d'Escompte de Paris ..	10,000,000	14	1,400,000	3,304,557
Yokohama Specie Bank Ltd. ..	10,000,000	12	600,000	9,864,235
Grand Total	65,965,245	..	4,465,825	43,170,257

(*a*) Dividend for quarter. (*b*) For twelve months.

4. **Liabilities and Assets.**—(i) *Liabilities, each State, Quarter ended 30th June, 1927.* Banks transacting business in any State are obliged, under the existing State laws, to furnish a quarterly statement of their assets and liabilities, which contains the averages of the weekly statements prepared by the bank for that purpose, and they have since the year 1908 furnished quarterly statements to the Commonwealth Statistician. As all other financial returns in this work generally refer to a period closing on the 30th June, the banking figures are given throughout for the June quarter of each year. The liabilities are those to the general public, and are exclusive of the banks' liabilities to their shareholders, which are shown in the preceding table. As the Commonwealth Bank

also engages in Savings Bank business, it has been deemed desirable to keep the figures for this bank separate from those of the Joint Stock banks. The figures set out in the tables which follow are, therefore, exclusive in every case of the Commonwealth Bank.

JOINT STOCK BANKS—LIABILITIES, JUNE QUARTER, 1927.

States and Territory.	Notes in Circulation not Bearing Interest.	Bills in Circulation not Bearing Interest.	Balances Due to Other Banks.	Deposits.			Total Liabilities.
				Not Bearing Interest.	Bearing Interest.	Total.	
	£	£	£	£	£	£	£
New South Wales	64,681	1,256,011	1,173,206	47,046,756	59,506,668	106,553,424	109,047,322
Victoria ..	86,410	468,266	1,059,994	33,616,887	58,307,023	91,923,910	93,538,580
Queensland ..	(a)	701,462	317,672	13,262,379	19,733,842	32,996,221	34,015,355
South Australia	22,288	101,918	506,151	8,151,591	14,473,718	22,625,309	23,255,666
Western Australia	25,247	151,659	230,435	5,404,752	4,663,062	10,067,814	10,475,155
Tasmania ..	2,317	52,729	156,776	2,494,034	3,339,838	5,833,872	6,045,694
Northern Territory	..	24	29,937	117,552	93,551	211,103	241,064
Total ..	200,943	2,732,069	3,474,171	110,093,951	160,117,702	270,211,653	276,618,836

(a) In Queensland, Treasury Notes were used instead of banknotes.

(ii) *Liabilities, all States, June Quarters, 1923 to 1927.* In the next table, which shows the average liabilities of the Joint Stock Banks for the quarters ended 30th June, 1923 to 1927, for Australia as a whole, the growth in liabilities is almost entirely due to an increase in the deposits bearing interest.

JOINT STOCK BANKS—LIABILITIES, JUNE QUARTER, 1923 TO 1927.

Year.	Notes in Circulation not Bearing Interest.	Bills in Circulation not Bearing Interest.	Balances Due to Other Banks.	Deposits.			Total Liabilities.
				Not Bearing Interest.	Bearing Interest.	Total.	
	£	£	£	£	£	£	£
1923 ..	207,228	2,279,149	3,724,411	108,937,936	131,903,047	240,840,983	247,051,771
1924 ..	204,830	2,439,885	4,037,173	106,378,836	133,273,020	239,651,856	246,333,744
1925 ..	202,875	2,584,705	3,239,759	108,562,243	142,023,225	250,585,468	256,612,807
1926 ..	201,551	2,792,080	3,549,630	111,420,109	153,372,042	264,792,151	271,335,412
1927 ..	200,943	2,732,069	3,474,171	110,093,951	160,117,702	270,211,653	276,618,836

(iii) *Assets, each State, Quarter ended 30th June, 1927.* The average assets of the banks are shown in the following table :—

JOINT STOCK BANKS.—ASSETS, JUNE QUARTER, 1927.

States and Territory.	Coined Gold and Silver and other Metals.	Gold and Silver in Bullion or Bars.	Australian Notes and Cash with Commonwealth Bank.	Government and Municipal Securities.	Landed and House Property.	Notes and Bills of other Banks.	Balances Due from other Banks.	Discounts, Overdrafts, and all other Assets.	Total Assets.
	£	£	£	£	£	£	£	£	£
N.S.W.	12,033,984	5,455	7,834,764	8,525,678	2,730,849	713,850	1,789,654	91,213,825	124,848,059
Victoria	8,084,718	54,807	7,476,120	4,981,418	1,895,218	850,584	850,163	75,668,559	99,861,587
Q'land.	2,113,538	1,326	2,390,659	1,229,947	986,510	298,176	514,139	31,929,661	39,463,956
S. Aust.	1,856,486	218	2,475,213	214,225	473,720	175,642	426,615	18,447,113	24,069,232
W. Aust.	1,404,277	123,033	1,817,764	167,964	442,241	98,605	95,986	14,047,168	18,197,038
Tasmania	640,960	210	552,974	..	170,561	25,137	36,278	4,819,660	6,245,780
Nor. Ter.	2,944	497	8,161	..	500	..	..	10,731	22,833
Total	26,136,907	185,546	22,555,655	15,119,232	6,699,599	2,161,994	3,712,835	236,136,717	312,708,485

(iv) *Assets, all States, June Quarters, 1923 to 1927.* The average assets of the banks for the June quarters of each of the years 1923 to 1927 are given below.

JOINT STOCK BANKS.—ASSETS, JUNE QUARTERS, 1923 TO 1927.

Year.	Coined Gold and Silver and Other Metals.	Gold and Silver in Bullion or Bars.	Australian Notes.	Landed and Other Property.	Notes and Bills of Other Banks.	Balances Due from Other Banks.	Discounts, Overdrafts, and all Other Assets.(*a*)	Total Assets.
	£	£	£	£	£	£	£	£
1923	18,716,430	559,004	25,037,449	5,721,410	1,920,488	5,390,423	203,526,917	260,872,121
1924	19,473,457	570,859	22,944,850	6,057,635	2,037,235	4,901,198	209,981,484	265,966,718
1925	22,567,729	4,484,679	23,211,903*b*	6,257,546	2,126,888	3,919,978	210,578,929	273,147,652
1926	26,387,013	283,320	22,635,460*b*	6,532,006	2,321,218	3,879,783	230,484,491	292,523,291
1927	26,136,907	185,546	22,555,655*b*	6,699,599	2,161,994	3,712,835	251,255,949	312,708,485

(*a*) Including Government and Municipal securities.
(*b*) Including Cash with Commonwealth Bank.

5. Percentage of Coin, Bullion, and Australian Notes on Liabilities at Call.—(i) *General.* Although it is not strictly correct to assume that the division of deposits into those bearing interest and not bearing interest would in every case coincide with a division into fixed deposits and current accounts, the division, in default of a better one, is adopted, and in the following table " liabilities at call " are therefore understood to include the note circulation of the banks and the deposits not bearing interest. Since 1912, however, the former item has steadily decreased, and is now almost negligible as compared with the latter.

JOINT STOCK BANKS.—PERCENTAGE ON LIABILITIES OF COIN, BULLION, AND AUSTRALIAN NOTES, 1923 TO 1927.

Year.	Liabilities at Call.	Coin, Bullion, and Australian Notes.	Percentage on Liabilities at Call.
	£	£	%
1923	109,145,164	44,312,883	40.60
1924	106,583,666	42,989,166	40.33
1925	108,765,118	50,264,311	46.21
1926	111,621,660	49,305,793	44.17
1927	110,294,894	48,878,108	44.32

The figures in the last column show that the banks generally consider it advisable to hold from 40 to 50 per cent. of the amount of liabilities at call in coin, bullion, and notes.

(ii) *Queensland Treasury Notes.* In Queensland, Treasury notes took the place of bank notes in 1893. These Treasury notes are disregarded in the quarterly statements of the banks; according to Treasury returns the amount outstanding on 30th June, 1927, was £22,601. Under the Australian Notes Act, previously referred to, the issue of notes by a State is now prohibited.

(iii) *Percentage in each State.* The proportion of coin, bullion, and Australian notes to liabilities at call varies considerably amongst the States, and sometimes in the same State from year to year. A table is appended showing the percentage for each State for the quarter ended 30th June in each of the years 1923 to 1927 :—

JOINT STOCK BANKS.—PERCENTAGE OF COIN, BULLION, AND AUSTRALIAN NOTES ON LIABILITIES AT CALL 1923 TO 1927.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	All States.
	%	%	%	%	%	%	%	%
1923 ..	39.46	40.82	31.54	54.32	50.68	45.54	10.96	40.60
1924 ..	39.99	39.85	33.20	49.96	48.96	42.61	11.29	40.33
1925 ..	49.49	46.07	31.50	50.79	50.60	48.63	8.43	46.21
1926 ..	44.73	45.53	30.52	49.71	59.24	46.69	6.95	44.17
1927 ..	42.19	46.33	33.97	52.99	60.86	47.84	9.87	44.32

6. **Deposits and Advances.**—(i) *Deposits.* The amount and average per head of population of deposits held by the banks during each of the last five years are given hereunder.

JOINT STOCK BANKS.—DEPOSITS, 1923 TO 1927.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	N. Ter.	All States.
				TOTAL.				
	£	£	£	£	£	£	£	£
1923	94,079,939	85,135,739	28,442,137	18,486,483	9,185,087	5,333,688	177,910	240,840,983
1924	90,529,921	84,301,488	29,649,564	20,085,213	9,236,755	5,661,494	187,421	239,651,856
1925	98,812,293	85,674,995	31,264,955	20,217,717	9,164,244	5,249,078	202,186	250,585,468
1926	104,372,446	90,067,719	33,668,028	21,362,996	9,565,222	5,540,665	215,075	264,792,151
1927	106,553,424	91,923,910	32,996,221	22,625,309	10,067,814	5,833,872	211,103	270,211,653
				PER HEAD OF POPULATION.				
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1923	42 19 4	53 1 6	35 11 2	35 16 8	26 9 5	24 16 3	49 3 2	42 8 9
1924	40 13 4	51 9 0	36 1 7	38 1 3	25 15 5	26 8 6	52 1 6	41 0 7
1925	43 9 6	51 6 8	36 16 9	37 5 7	24 19 1	24 12 7	54 13 9	42 7 0
1926	45 0 3	53 4 2	38 10 10	38 6 11	22 17 7	26 5 9	57 11 1	43 18 2
1927	44 16 1	53 4 11	36 17 10	39 12 7	26 2 11	28 0 6	49 11 1	43 16 3

(ii) *Advances.* In the quarterly statements furnished by the banks, the column headed "all other debts due to the banks" is made up of such miscellaneous items as bills discounted, promissory notes discounted, overdrafts on personal security, overdrafts secured by deposit of deeds or by mortgage, etc. The form prescribed for quarterly returns furnished to the Commonwealth Statistician in 1908 and 1909 provided for a division of the amounts under this heading into a number of sub-headings, but all the banks were not in a position to make the necessary division, and as it is impossible to separate these items the totals in the column must, therefore, be treated as advances. The following table shows the totals for each State during the years 1922 to 1927:—

JOINT STOCK BANKS.—ADVANCES, 1923 TO 1927.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	N. Ter.	All States.
	£	£	£	£	£	£	£	£
1923	74,737,819	61,055,847	23,361,167	14,234,371	10,107,456	4,732,433	6,455	188,235,548
1924	78,861,693	63,914,412	26,076,079	14,310,376	10,748,734	4,831,856	7,625	198,750,775
1925	77,993,259	63,181,481	26,738,792	13,623,369	11,216,634	4,688,567	8,800	197,450,902
1926	85,124,897	67,568,544	28,272,761	15,017,374	12,712,905	4,546,061	9,478	213,252,020
1927	91,213,825	75,668,559	31,929,661	18,447,113	14,047,168	4,819,660	10,731	236,136,717

(iii) *Proportion of Advances to Deposits.* The percentage of advances on total deposits shows to what extent the needs of one State are supplied by the resources of another State, and, where the percentage for Australia as a whole exceeds 100 (as it did in the early years of the century), the banks must have supplied the deficiency from their own resources, or from deposits obtained outside Australia. The following figures show, however, that the banking business of Australia has been self-contained in every State, except Western Australia, during the period under review :—

JOINT STOCK BANKS.—PERCENTAGE OF ADVANCES ON DEPOSITS, 1923 TO 1927.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	All States.
	%	%	%	%	%	%	%	%
1923 ..	79.44	71.72	82.14	77.00	110.04	88.73	3.63	78.16
1924 ..	87.11	75.82	87.95	71.25	116.37	85.35	4.07	82.93
1925 ..	78.93	73.75	85.51	67.38	122.39	89.32	4.35	78.79
1926 ..	81.56	75.02	83.98	70.30	132.91	82.05	4.41	80.54
1927 ..	85.60	82.32	96.77	81.53	139.53	82.62	5.08	87.39

7. **Commonwealth Bank of Australia.**—(i) *Liabilities, June Quarter, 1927.*—On account of the magnitude of the Savings Bank business of this bank, the figures have been separated from those of the Joint Stock banks, and are shown hereunder. The total deposits amounted to £72,863,855, of which Savings Bank deposits accounted for £44,212,050 or 60 per cent.

COMMONWEALTH BANK OF AUSTRALIA.—LIABILITIES, JUNE QUARTER, 1927.

States and Territory.	Bills in Circulation.	Balances Due to Other Banks.	Deposits.				Total Liabilities.
			Not Bearing Interest.	Bearing Interest.	Savings Bank Deposits.	Total Deposits.	
	£	£	£	£	£	£	£
New South Wales	75,626	2,223,330	7,542,509	2,404,554	9,890,238	19,837,301	22,136,257
Victoria ..	95,438	2,522,068	3,275,011	1,707,612	5,887,485	10,870,108	13,487,614
Queensland ..	63,703	823,943	6,620,083	2,446,300	21,775,351	30,841,734	31,729,380
South Australia	12,805	783,655	1,497,086	151,200	2,503,828	4,152,114	4,948,574
Western Australia	9,232	779,664	1,064,765	1,171,157	2,593,557	4,829,479	5,618,375
Tasmania ..	1,801	174,194	436,049	335,282	1,518,314	2,289,645	2,465,640
Northern Territory	..	..	..	197	43,277	43,474	43,474
Total ..	258,605	7,306,854	20,435,503	8,216,302	44,212,050	72,863,855	80,429,314

(ii) *Liabilities, all States, June Quarters, 1923 to 1927.*—The average liabilities in the years specified are given in the table below.

COMMONWEALTH BANK OF AUSTRALIA.—LIABILITIES, JUNE QUARTERS, 1923 TO 1927.

Quarter ended 30th June—	Bills in Circulation.	Balances Due to Other Banks.	Deposits.				Total Liabilities.
			Not Bearing Interest.	Bearing Interest.	Savings Bank Deposits.	Total Deposits.	
	£	£	£	£	£	£	£
1923	204,576	29,849	17,718,999	14,658,671	38,102,850	70,480,520	70,714,945
1924	212,362	29,061	23,004,674	6,899,902	38,273,478	68,178,054	68,419,477
1925	265,936	3,940,022	23,381,481	7,828,650	39,798,481	71,008,612	75,214,570
1926	355,240	6,045,894	23,350,534	7,103,349	43,068,182	73,522,065	79,923,199
1927	258,605	7,306,854	20,435,503	8,216,302	44,212,050	72,863,855	80,429,314

(iii) *Assets, June Quarter, 1927.* The assets for the June Quarter, 1927, are as follows :—

COMMONWEALTH BANK OF AUSTRALIA.—ASSETS, JUNE QUARTER, 1927.

States and Territory.	Coin.	Bullion.	Australian Notes.	Government and Municipal Securities.	Landed and House Property.	Notes and Bills of Other Banks.	Balances Due from Other Banks.	Discounts, Overdrafts, and all other Assets (not including Contingent Assets).	Total Assets.
	£	£	£	£	£	£	£	£	£
N.S.W. ..	204,358	..	2,118,571	18,139,346	294,870	712,667	511,006	6,671,684	28,652,502
Victoria ..	599,711	10,549	2,282,245	6,210,694	236,346	586,359	462,661	3,677,086	14,065,651
Queensland	61,139	86	860,761	22,348,482	95,588	295,579	213,244	5,430,646	29,305,522
S. Australia	52,184	..	891,538	2,323,336	57,995	421,485	152,679	634,052	4,583,269
W. Australia	193,710	574	417,011	1,879,129	20,271	95,573	149,960	460,523	3,216,754
Tasmania ..	30,498	..	522,590	2,003,876	..	30,303	61,007	169,468	2,817,742
Nor. Ter. ..	..	..	..	..	..	16,000	29,865	308	46,173
Total ..	1,141,600	11,209	7,092,716	52,904,863	705,070	2,157,966	1,580,422	17,043,767	82,637,613

(iv) *Assets, all States, June Quarters, 1923 to 1927.*—The great increase in Australian Notes is due in part to the obligation imposed by the Commonwealth Bank Act, 1924, on the Joint Stock banks of settling their exchanges through the Commonwealth Bank.

COMMONWEALTH BANK OF AUSTRALIA.—ASSETS, JUNE QUARTERS, 1923 TO 1927.

Quarter ended 30th June—	Coin.	Bullion.	Australian Notes.	Government and Municipal Securities.	Landed and House Property.	Notes and Bills of Other Banks.	Balances Due from Other Banks.	Discounts, Overdrafts, and all other Assets (not including Contingent Assets).	Total Assets.
	£	£	£	£	£	£	£	£	£
1923 ..	2,637,450	9,397	3,750,438	37,479,846	762,730	5,138,747	2,772,000	14,035,767	66,586,375
1924 ..	2,100,874	6,683	9,084,343	39,537,851	917,413	966,787	4,872,321	11,999,432	69,485,704
1925 ..	4,675,665	2,251	14,000,587	38,811,260	943,624	980,030	3,330,693	11,950,338	74,694,448
1926 ..	6,016,703	945	12,219,139	42,278,108	848,416	954,635	2,889,718	13,113,051	78,320,715
1927 ..	1,14,1,600	11,209	7,092,716	52,904,863	705,070	2,157,966	1,580,422	17,043,767	82,637,613

8. **Clearing Houses.**—The Sydney Banks' Exchange Settlement, and the Melbourne Clearing House, at which settlements are effected daily between the banks doing business in New South Wales and Victoria respectively, publish figures of the weekly clearances effected. From these it appears that in 1927 the total clearances in Sydney amounted to £1,034,894,000, and in Melbourne to £825,676,000. Owing to the different distribution of the banking business in the two cities, the figures do not necessarily afford a fair comparison of the volume of banking business transacted in Sydney and Melbourne. With the exception of Brisbane, where a decline of nearly £3,500,000 was recorded, the clearing house returns for 1927 show an increase over those for 1926. The average weekly clearances for each month are published in the Quarterly Summary of Australian Statistics. Returns of all Australian Clearing Houses for the last five years are shown in the following table :—

CHEQUE-PAYING BANKS.—CLEARING HOUSE RETURNS, 1923 TO 1927.

Year.	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.
	£	£	£	£	£	£
1923	805,032,000	697,050,000	194,915,000	160,524,000	83,730,000	..
1924	845,855,000	734,080,000	212,220,000	179,335,000	97,920,000	..
1925	909,114,000	803,083,000	192,968,000	171,092,000	101,085,000	25,557,000
1926	954,523,000	790,111,000	195,710,000	178,898,000	103,523,000	25,691,000
1927	1,034,894,000	825,676,000	192,274,000	186,752,000	111,454,000	26,805,000

§ 3. Savings Banks.

1. **General.**—In the following tables dealing with Savings Banks the figures for all the States except Tasmania refer to financial years ended 30th June. In the case of Tasmania, figures for the two trustee savings banks are made up to the last day of August. The figures in each State are inclusive of the Savings Bank Department of the Commonwealth Bank made up to the 30th June.

2. **Accounts Open.**—The number of accounts open, not of individual depositors, and the number per 1,000 of the population, at 30th June in each of the last five years are shown in the following table :—

SAVINGS BANKS.—ACCOUNTS OPEN. 1923 TO 1927.

30th June.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	N. Ter.*	All States.
				NUMBER.				
1923 ..	1,246,191	1,188,437	355,902	432,438	250,214	124,850	869	3,598,901
1924 ..	1,306,948	1,268,629	375,025	452,342	264,842	130,032	844	3,798,662
1925 ..	1,374,976	1,337,093	397,710	470,599	278,071	132,841	911	3,992,201
1926 ..	1,446,432	1,396,438	420,908	489,148	292,353	136,309	978	4,182,566
1927 ..	1,606,492	1,455,581	438,282	512,332	309,546	138,474	1,197	4,461,904
				PER 1,000 OF POPULATION.				
1923 ..	568	739	442	836	719	583	238	633
1924 ..	586	774	453	855	735	610	233	655
1925 ..	604	800	465	866	756	627	242	673
1926 ..	624	824	479	876	779	651	259	692
1927 ..	676	843	490	897	804	665	281	723

In connexion with the number of accounts open per 1,000 of the population, it must be borne in mind that savings bank accounts are not restricted to adults, since many accounts are opened in the names of children. The proportion, notwithstanding, is a very large one, amounting in the case of Australia to almost three-quarters and rising in Victoria to more than four-fifths and in South Australia to nine-tenths of the population. As it is possible in some States for the same person to have accounts in both Commonwealth and State Savings Banks, the figures given are somewhat in excess of the number of individual depositors. Allowance must also be made for the fact that the funds of various societies, small trust funds, etc., are sometimes deposited in Savings Banks.

3. **Deposits.**—The deposits in Australia reached in 1927 the large sum of £204,573,963, and would no doubt be even larger if the banks did not restrict interest-bearing deposits to certain limits. While not granting facilities to draw cheques, the Australian savings banks practically afford the small tradesman all the advantages of a current account, and in addition allow interest on the minimum monthly balance instead of charging a small fee for keeping the account, as is the practice of the ordinary banks. All the Savings Banks have a reciprocity arrangement, under which money deposited in one State may be drawn out in another State, even by telegraph.

The table below shows the amount at credit of depositors, the average per account open, and the average amount deposited per head of population at the end of each of the last five years:—

SAVINGS BANKS.—DEPOSITS, 1923 TO 1927.

30th June.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	N. Ter.	All States.
				TOTAL.				
	£	£	£	£	£	£	£	£
1923	64,324,670	56,101,260	20,483,581	18,249,540	8,033,419	4,414,653	36,689	171,643,812
1924	66,162,055	58,028,190	20,410,364	19,351,127	8,218,147	4,670,804	30,790	176,871,477
1925	69,149,433	59,551,895	21,339,901	20,152,175	8,303,933	4,505,476	32,961	183,035,774
1926	73,807,650	63,253,525	22,836,909	21,778,970	8,969,824	4,768,085	36,577	195,451,540
1927	78,351,733	65,352,619	22,452,749	23,600,897	9,694,396	5,073,544	48,025	204,573,963
				AVERAGE PER SAVINGS BANK ACCOUNT.				
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d
1923	51 12 4	47 4 1	57 11 1	42 4 0	32 2 1	35 7 2	42 4 5	47 13 10
1924	50 12 6	45 14 10	54 8 6	42 15 7	31 0 7	35 18 5	36 9 7	46 11 3
1925	50 5 10	44 10 9	53 13 2	42 16 5	29 17 3	33 18 4	36 3 8	45 16 11
1926	51 0 6	45 5 11	54 5 1	44 10 6	30 13 8	34 19 7	38 0 0	46 14 7
1927	48 15 5	44 17 11	51 4 7	46 1 4	31 6 4	36 12 9	40 2 5	45 17 0
				PER HEAD OF POPULATION.				
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1923	29 6 9	34 17 11	25 8 6	35 6 5	23 1 6	20 13 0	10 1 2	30 3 6
1924	29 13 4	35 7 9	24 13 3	36 11 10	22 16 1	21 18 2	8 9 10	30 9 6
1925	30 7 7	35 12 10	24 19 1	37 2 1	22 11 3	21 5 3	8 15 0	30 17 5
1926	31 16 10	37 6 7	25 19 5	38 19 11	23 18 2	22 15 6	9 13 10	32 6 9
1927	33 1 0	37 17 1	25 2 1	41 6 10	25 3 7	24 7 5	11 5 6	33 3 5

A comparison of the number of accounts open and the amount of deposits shows that the average amounts to the credit of each account are considerably larger in some States than in others; in other words, in one State a comparatively larger proportion of the population makes use of the savings banks than in another, with the result that there is a smaller amount to the credit of the individual account. Within the same State there is a little variation in the figures from year to year, except that each State generally shows a steady advance.

The average amount deposited per head of population increased during the period by 10 per cent., the figures for New South Wales, South Australia, and Tasmania being particularly noticeable.

4. **Rates of Interest.**—The rates of interest allowed, and the limits of interest-bearing deposits, are as follows :—New South Wales, Government Savings Bank, 4 per cent. up to £500 and 3½ per cent. on the excess up to £1,000 ; Victoria, 4 per cent. on first £500 and then 3 per cent. for a further £500, also 4 per cent. on deposit stock up to £1,000. Commencing 1st July, 1927, however, the rate is 4 per cent. up to £1,000 and 4½ per cent. on deposit stock up to £1,000. South Australia 4 per cent. on accounts closed during the year, and 4¾ per cent. up to £500 on accounts remaining open ; Western Australia, 3½ per cent. on current accounts, and 4½ per cent. on deposits up to £1,000 ; Hobart Trustees' Savings Bank, 4½ per cent. up to £300 ; Launceston Trustees' Savings Bank, 4½ per cent. up to £150, and Commonwealth Savings Bank, 3½ per cent. on the first £1,000, and 3 per cent. upon another £300. From 1st October, 1928, the Commonwealth Savings Bank increased the rates for the first £500 to 4 per cent.

5. **Annual Business.**—The business transacted by the savings banks is very large when compared with the total amount of deposits. This is of course due to the fact that many accounts are used as convenient current accounts. Thus, during the last year of the period under review, the total amount deposited and withdrawn (exclusive of interest added) was almost double the total amount of deposits at the end of the previous

year, while the amount at credit of depositors (inclusive of interest added) increased by more than 5 per cent. during the same year. The following table shows the business transacted during the year 1926–27:—

SAVINGS BANKS.—TRANSACTIONS, 1926–27.

States and Terr.tory.	Total Deposits at end of Year 1925–26.	Amounts Deposited during Year 1926-27.	Interest Added during Year 1926–27.	Total.	Amounts Withdrawn during Year 1926–27.	Total Deposits at end of Year 1926–27.
	£	£	£	£	£	£
New South Wales ..	73,807,650	76,345,393	2,701,016	152,854,059	74,502,326	78,351,733
Victoria	63,253,525	58,444,977	2,324,538	124,023,040	58,670,421	65,352,619
Queensland.. ..	22,836,909	24,373,113	738,589	47,948,611	25,495,862	22,452,749
South Australia ..	21,778,970	19,270,556	951,798	42,001,324	18,400,427	23,600,897
Western Australia ..	8,969,824	10,588,702	304,949	19,863,475	10,169,079	9,694,396
Tasmania	4,768,085	3,968,026	187,854	8,923,965	3,850,421	5,073,544
Northern Territory ..	36,577	56,628	1,289	94,494	46,469	48,025
Total ..	195,451,540	193,047,395	7,210,033	395,708,968	191,135,005	204,573,963

6. **Commonwealth Savings Bank.**—The figures in the preceding tables include those relating to the Savings Bank Department of the Commonwealth Bank, which commenced operations in Victoria on the 15th July, 1912, in Queensland on the 16th September, 1912, in the Northern Territory on the 21st October, 1912, and in the States of New South Wales, South Australia, and Western Australia on the 13th January, 1913. Extensive use is made of the country post-offices as local agencies.

The Commonwealth Bank absorbed the Tasmanian State Savings Bank in January, 1913, on terms set out in Official Year Book No. 6. The transfer of the Queensland Savings Bank was effected in 1920.

The following table gives the number of accounts, and the amount at credit on 30th June, 1927, at the various branches of the Commonwealth Savings Bank:—

COMMONWEALTH SAVINGS BANK, 30th JUNE, 1927.

Locality.	Number of Accounts.	Amount at Credit.
		£
New South Wales	326,718	10,493,645
Victoria	168,205	6,072,831
Queensland	438,282	22,452,749
South Australia	62,791	2,566,300
Western Australia	83,686	2,728,867
Tasmania	64,303	1,577,731
Northern Territory	1,197	48,025
Total, Australia	1,145,182	45,940,148
Papua and New Guinea	2,119	95,923
London	7,147	442,949
Grand Total	1,154,448	46,479,020

§ 4. Companies.

1. **General.**—Returns in regard to registered companies are defective, and, with few exceptions, are not available for Tasmania. They embrace (*a*) Returns relating to Trustees, Executors and Agency Companies; (*b*) Returns relating to Registered Building and Investment Societies; and (*c*) Returns relating to Registered Co-operative Societies.

2. **Trustees, Executors and Agency Companies.**—Returns are available for eight Victorian, two New South Wales, one Queensland, four South Australian, two Western Australian, and three Tasmanian companies. The paid-up capital of these twenty companies amounted to £1,144,327; reserve funds and undivided profits to £804,444; other liabilities, £375,292; total liabilities, £2,324,063. Among the assets are included—Deposits with Governments, £217,504; other investments in public securities, fixed deposits, etc., £579,857; loans on mortgage, £315,247; property owned, £791,121;

other assets, £420,334. Of the twenty companies, nine show the total amount of the estates, etc., under administration, the total for 1927 being approximately £94,000,000. In respect of the twenty companies, net profits for the year totalled £210,075, of which £138,826 was paid in dividends.

3. **Registered Building and Investment Societies.**—(i) *General.* Returns have been received relating to 86 societies, viz., 7 in New South Wales, 26 in Victoria, 10 in Queensland, 24 in South Australia, 15 in Western Australia, and 4 in Tasmania. The information is not exhaustive, as particulars regarding unimportant organizations are not included.

REGISTERED BUILDING AND INVESTMENT SOCIETIES.—SUMMARY, 1926.

Particulars.	N.S.W. 1926.	Victoria. 1925–26.	Q'land. 1925–26.	S. Aust. 1926.	W. Aust. 1925–26.	Tasmania. 1926.	All States.
Number of societies ..	7	26	10	24	15	4	86
Number of shareholders ..	2,375	10,751	5,621	17,011	10,280	2,682	48,720
Number of shares ..	27,774	(*a*)	1,203,704	69,958	30,060	34,739	*b*1,366,235
Number of borrowers ..	4,586	11,394	3,205	3,095	1,860	1,418	25,558
Income for year from interest .. £	111,207	339,810	59,003	36,271	(*c*)	38,908	585,199
Working expenses for year £	96,450	152,335	9,329	13,994	37,165	5,663	314,936
Amount of deposits during year .. .. £	299,892	1,795,306	136,904	27,854	184,299	29,101	2,473,356
Repayment of loans during year .. .. £	314,698	1,028,014	178,050	158,721	111,827	97,039	1,888,349
Loans granted during year £	277,244	1,025,581	216,969	216,900	155,785	84,664	1,977,143

(*a*) Not available. (*b*) Exclusive of Victoria. (*c*) Included in repayment of Loans.

(ii) *Liabilities and Assets.* The balance-sheets of the companies in respect of which particulars of liabilities and assets are stated hereunder cover periods ended during the year 1926. The figures quoted for the States of New South Wales, South Australia and Tasmania refer to the calendar year 1926, while those for the remaining States are for the fiscal year 1925–26.

REGISTERED BUILDING AND INVESTMENT SOCIETIES.—LIABILITIES, 1926.

State.	Paid-up Capital or Subscriptions.	Reserve Funds.	Deposits.	Bank Overdrafts and other Liabilities.	Total Liabilities.
	£	£	£	£	£
New South Wales ..	417,651	280,192	561,733	18,929	1,278,505
Victoria	1,844,788	598,011	1,654,006	163,975	4,260,780
Queensland.. ..	814,443	31,232	9,410	68,308	923,393
South Australia ..	605,093	82,925	23,604	21,826	733,448
Western Australia ..	440,194	18,316	78,761	11,184	548,455
Tasmania	220,262	83,047	232,415	10,759	546,483
Total ..	4,342,431	1,093,723	2,559,929	294,981	8,291,064

REGISTERED BUILDING AND INVESTMENT SOCIETIES.—ASSETS, 1926.

State.	Advances on Mortgage.	Landed and House Property, Furniture, etc.	Cash in hand and on Deposit and other Assets.	Total Assets.
	£	£	£	£
New South Wales	4,147,594	121,800	134,610	4,404,004
Victoria	3,882,236	101,372	119,429	4,103,037
Queensland	676,290	21,278	35,880	733,448
South Australia	590,301	20,471	36,213	646,985
Western Australia	461,699	10,390	74,394	546,483
Tasmania	446,918	10,390	56,567	513,875
Total	10,205,038	285,701	457,093	10,947,832

4. **Co-operative Societies.**—(i) *General.* The returns relating to Co-operative Societies have been divided into two classes—(i) those engaged in the manufacture and marketing of primary products and trade requirements, and (ii) those engaged in retailing general household requirements. The former may be described briefly as Producers' Co-operative and the latter as Consumers' Co-operative Societies. The following table shows the number of societies, the membership, and the financial result for the year 1926 :—

CO-OPERATIVE SOCIETIES.—NUMBER, MEMBERSHIP AND TRADING RESULTS, 1926.

Heading.		N.S.W. 1925-26.	Vic. 1925-26.	Qld. 1925-26	S.A. 1926.	W.A. 1925-26.	Tas. 1925-26.	All States.
Producers' Co-operative Societies—								
Number of societies ..		115	68	52	31	35	14	315
Membership		45,256	50,847	31,093	7,260	2,894	5,017	142,367
Gross turnover (Sales)	£	9,975,068	11,730,709	5,719,789	511,206	445,174	201,519	28,583,465
Total working expenses	£	*a*10,561,830	1,959,442	1,603,334	205,778	62,614	233,235	14,626,233
Rebates and bonuses	£	71,759	9,638	1,315	11,654	4,946	1,266	100,578
Dividends on share capital	£	40,370	38,807	9,929	8,342	2,473	1,520	101,441
Rate per cent.		4.6	3.0	1.8	4.5	3.5	2.0	3.3
Consumers' Co-operative Societies—								
Number of societies ..		54	54	11	9	12	4	144
Membership		67,494	16,906	27,019	34,279	2,705	711	149,114
Gross turnover (Sales)	£	4,742,219	1,424,266	220,253	1,469,419	170,697	107,630	8,134,484
Total working expenses	£	*a*4,467,877	229,692	157,357	302,114	79,635	103,421	5,340,096
Rebates and bonuses	£	300,490	30,710	..	43,818	..	1,515	376,533
Dividends on share capital	£	34,588	11,598	1,057	27,188	1,332	1,077	76,840
Rate per cent.		4.3	5.1	0.9	4.6	4.6	4.9	4.3

(*a*) Includes payments to suppliers.

(ii) *Liabilities and Assets.* The next table gives the liabilities and assets.

CO-OPERATIVE SOCIETIES.—LIABILITIES AND ASSETS, 1926.

Heading.	N.S.W. 1925-26.	Vic. 1925-26.	Q'land. 1925-26.	S.A. 1926.	W.A. 1925-26.	Tas. 1925-26.	All States.
Producers' Co-operative Societies—	£	£	£	£	£	£	£
Liabilities—							
Paid-up capital	879,085	1,285,936	561,031	181,323	70,621	75,539	3,053,535
Loan capital ..	*a*1,590,988	302,807	213,556	228,747	9,828	16,129	3,512,027
Overdraft ..		788,665	221,320	69,863	36,281	33,843	
Reserves and undivided profits	443,693	470,601	280,804	74,215	52,916	19,846	1,342,075
Other liabilities	49,521	558,004	391,718	180,058	74,202	131,567	1,385,070
Total liabilities	2,963,287	3,406,013	1,668,429	734,206	243,848	276,924	9,292,707
Assets—							
Land, building, and plant ..	1,314,810	1,396,431	1,024,621	353,238	54,653	94,806	4,238,559
Stocks	307,169	577,829	233,126	177,141	73,853	50,513	1,419,631
Other assets	1,341,308	1,431,753	410,682	203,827	115,342	131,605	3,634,517
Total assets ..	2,963,287	3,406,013	1,668,429	734,206	243,848	276,924	9,292,707
Consumers' Co-operative Societies—							
Liabilities—							
Paid-up capital	800,822	227,016	116,521	590,957	28,962	21,981	1,786,259
Loan capital ..	(*a*) 342,999	63,248	171	186,211	1,709	6,004	781,174
Overdraft ..		133,251	5,347	29,287	6,873	6,074	
Reserves and undivided profits	391,287	159,983	229,626	161,791	7,990	11,143	961,820
Other liabilities	4,373	146,498	84,822	37,845	23,126	20,091	316,755
Total liabilities ..	1,539,481	729,996	436,487	1,006,091	68,660	65,293	3,846,008
Assets—							
Land, buildings, and plant	437,578	222,882	139,488	308,368	24,064	19,798	1,152,178
Stocks	466,180	240,175	15,315	355,451	17,304	21,426	1,115,851
Other assets	635,723	266,939	281,684	342,272	27,292	24,069	1,577,979
Total assets ..	1,539,481	729,996	436,487	1,006,091	68,660	65,293	3,846,008

(*a*) Includes sundry creditors.

§ 5. Life Assurance.

[NOTE.—A Conspectus of Australian Life Assurance Legislation was published in Official Year Book No. 18, 1925, in Chap. XXVII. "Miscellaneous."]

1. **General.**—Under section 51 of the Commonwealth Constitution Act, the Commonwealth Parliament is empowered to legislate in regard to "insurance, other than State insurance; also State insurance extending beyond the limits of the State concerned." With the exception of Act No. 12 of 1905, "An Act relating to assurance on the lives of children by life assurance companies or societies," no legislation relating to life assurance has been passed by the Commonwealth Parliament, and life assurance companies carry on their business under State laws where such laws are in existence, or otherwise under the provisions of various companies or special Acts.

Returns for the year 1926 have been collected from life assurance societies, with results which are in the main satisfactory. The figures below refer to Australian business only.

2. **Companies Transacting Business.**—(i) *General.* The number of companies transacting life assurance business in Australia during 1926 was 35, of which the full name and location of head office are set out in the Finance Bulletin, No. 18, for 1926–27.

Of the thirty-two Australian companies seven are purely mutual, and twenty-four are proprietary companies with a paid-up capital aggregating £2,091.916, part of which is, however, used in fire, marine, and accident insurance business. One office is a State government institution. Three oversea companies transacted business in Australia in 1926, one being mutual and two proprietary companies.

(ii) *Ordinary and Industrial Business.* Of the societies enumerated in the preceding paragraph, fifteen transacted both ordinary and industrial business. Ordinary and industrial business have, where possible, been kept separate, while figures relating to companies whose head offices are in New Zealand or in Europe or America have been restricted to the Australian business.

3. **Australian Business, 1926.**—(i) *Ordinary.* The subjoined table shows the ordinary life business in force for each of the last five years. While the total sum assured has increased by almost 52 million pounds, the average per policy has increased from £256 to £293. The amount assured in 1926 represents an average of £41 per head of population.

ORDINARY LIFE ASSURANCE.—AUSTRALIAN BUSINESS, 1922 TO 1926.

Year.	Policies in Force.	Amount.	Average per Policy.	Annual Premium Income.
	No.	£	£	£
1922	769,893	196,844,810	256	6,526,907
1923	795,887	210,049,945	264	6,925,581
1924	820,138	224,129,981	273	7,388,353
1925	834,936	235,687.567	282	7,783.781
1926	848,427	248,549,883	293	8,195,880

(ii) *Industrial.* Information in regard to the industrial business of the fifteen societies transacting it is given in the following table.

The amount assured has increased by nearly 56 per cent. in the period under review. The average amount per policy in 1926 was £39, comparing with an average of £33 in 1922.

INDUSTRIAL LIFE INSURANCE.—AUSTRALIAN BUSINESS, 1922 TO 1926.

Year.	Policies in Force.	Amount.	Average per Policy.	Annual Premium Income.
	No.	£	£	£
1922	1,061,569	35,303,233	33	2,087,148
1923	1,144,004	40,009,115	35	2,387,187
1924	1,233,925	45,256,580	37	2,681,774
1925	1,310,642	49,907,583	38	2,923,519
1926	1,395,744	54,990,807	39	3,220,154

4. Income and Outgo.—(i) *Ordinary Business.* The following table shows the aggregate Australian income for the last four years of all the societies doing business in Australia. In the latter year premiums—new and renewal—amounted to 59 per cent , and interest, dividends, and rent to nearly 38 per cent. of the Australian income.

ORDINARY LIFE ASSURANCE.—AUSTRALIAN INCOME, 1923 TO 1926.

Heading.	Amount.			
	1923.	1924.	1925.	1926.
	£	£	£	£
Premiums—New	976,682	991,367	1,049,159	1,047,965
Renewal	5,948,899	6,396,986	6,734,622	7,147,915
Consideration for annuities ..	48,191	78,434	57,378	81,083
Interest, dividends, and rents ..	4,078,407	4,488,989	4,809,117	5,207,580
Other receipts	218,961	208,350	875,609	307,558
Total income ..	11,271,140	12,164,126	13,525,885	13,792,101

In 1926 outgo amounted to £8,181,771, of which claims accounted for 56 per cent., surrenders nearly 13 per cent., expenses of management 10 per cent., and commission 9 per cent.

ORDINARY LIFE ASSURANCE.—AUSTRALIAN OUTGO, 1923 TO 1926.

Heading.	Amount.			
	1923.	1924.	1925.	1926.
	£	£	£	£
Claims	3,926,371	4,079,237	4,379,233	4,596,541
Surrenders	838,066	819,874	920,675	1,055,957
Annuities	95,550	101,880	99,662	102,280
Commission	611,914	637,833	718,346	720,780
Expenses of management ..	817,508	817,119	838,455	846,847
Licence fees and taxes ..	113,302	128,922	131,861	149,501
Shareholders' dividends ..	58,037	83,515	68,480	87,806
Cash bonuses paid to shareholders	309,429	338,120	362,041	380,461
All other expenses	387,849	205,083	250,642	241,598
Total outgo ..	7,158,026	7,211,583	7,769,395	8,181,771

A summary for the last five years is given hereunder :—

ORDINARY LIFE ASSURANCE.—AUSTRALIAN INCOME AND OUTGO, 1922 TO 1926.

Year.	Income.	Outgo.	Excess Income.
	£	£	£
1922	10,518,557	6,700,468	3,818,089
1923	11,271,140	7,158,026	4,113,114
1924	12,164,126	7,211,583	4,952,543
1925	13,525,885	7,769,395	5,756,490
1926	13,792,101	8,181,771	5,610,330

(ii) *Industrial Business.* The aggregate Australian income for 1923, 1924, 1925, and 1926 of societies transacting industrial business was as follows :—

INDUSTRIAL LIFE ASSURANCE.—AUSTRALIAN INCOME, 1923 TO 1926.

Heading.	Amount.			
	1923.	1924.	1925.	1926.
	£	£	£	£
Premiums—New and renewal ..	2,387,187	2,681,774	2,923,519	3,220,154
Consideration for annuities ..	268	13	13	13
Interest, dividends, and rents ..	512,644	598,335	709,943	811,977
Other receipts	20,584	19,847	22,699	27,755
Total income ..	2,920,683	3,299,969	3,656,174	4,059,899

Outgo during 1926 totalled £2,377,977. Claims amounted to 39 per cent., commission 33 per cent., and expenses of management 17 per cent.

INDUSTRIAL LIFE ASSURANCE.—AUSTRALIAN OUTGO, 1923 TO 1926.

Heading.	Amount.			
	1923.	1924.	1925.	1926.
	£	£	£	£
Claims	514,156	601,908	731,480	926,399
Surrenders	50,846	71,627	95,658	109,398
Annuities	295	295	295	295
Commission	589,029	692,975	699,452	779,472
Expenses of management	321,692	355,350	379,905	402,211
Licence fees and taxes	17,297	20,777	23,649	24,817
Shareholders' dividends	56,809	54,766	60,742	64,676
Cash bonuses paid to shareholders ..	13	26	..	..
All other expenses	87,509	66,829	87,346	70,709
Total outgo	1,637,646	1,864,553	2,078,527	2,377,977

The aggregate income and outgo for the last five years were as follows :—

INDUSTRIAL LIFE ASSURANCE.—AUSTRALIAN INCOME AND OUTGO, 1922 TO 1926.

Year.	Income.	Outgo.	Excess Income.
	£	£	£
1922	2,504,791	1,355,812	1,148,979
1923	2,920,683	1,637,646	1,283,037
1924	3,299,969	1,864,553	1,435,416
1925	3,656,174	2,078,527	1,577,647
1926	4,059,899	2,377,977	1,681,922

5. **Liabilities and Assets, 1926.**—(i) *General.* The liabilities of the Australian societies consist mainly of their assurance funds; as already mentioned, however, some of the societies are proprietary, and in these cases there is a further liability on account of the shareholders' capital. The assets consist chiefly of loans on mortgage and policies, Government, municipal, and similar securities, shares, freehold property, etc. As in some cases the Australian liabilities exceed the Australian assets, this table should be read in connexion with the table dealing with assets. Loans on personal security are granted by very few of the Australian societies.

(ii) *Ordinary and Industrial Business.* For various reasons several societies do not attempt the division of liabilities and assets between the industrial and ordinary branches, and a few societies cannot state the amount of liabilities in Australia. In the following table, therefore, the figures relate to both branches. Australian liabilities amounted in 1926 to £83,768,937, including assurance and annuity funds, £72,307,626, other funds, including those used in fire and marine business, £6,609,019, and paid-up capital, £1,891,916.

Australian assets aggregated £109,025,348, of which the following are the principal items :—Government and municipal securities, £60,354,135 ; mortgages, £20,146,487 ; loans on companies' policies, £10,543,370 ; and landed and house property, £4,081,973. Details regarding liabilities for the years 1923 to 1926 are given in the next table :—

ORDINARY AND INDUSTRIAL LIFE ASSURANCE.—AUSTRALIAN LIABILITIES, 1923 TO 1926.

Heading.	Amount.			
	1923.	1924.	1925.	1926.
	£	£	£	£
Shareholders' capital, paid up.. ..	1,307,877	1,469,795	1,842,963	1,891,916
Assurance and annuity funds	56,480,692	60,022,243	66,119,414	72,307,626
Other funds	4,380,967	5,069,632	6,018,968	6,609,019
Claims admitted but not paid.. ..	632,116	695,404	799,584	772,088
All other liabilities	1,299,212	1,517,967	1,809,185	2,188,288
Total Australian liabilities (*a*)..	64,100,864	68,775,041	76,590,114	83,768,937

(*a*) Excluding Mutual Life and Citizens, People's Prudential, National Mutual, Western Australian, London and Liverpool and Globe, and Mutual Life of United States.

Assets for the years specified are set out in detail in the table hereunder :—

ORDINARY AND INDUSTRIAL LIFE ASSURANCE.—AUSTRALIAN ASSETS, 1923 TO 1926.

Heading.	Amount.			
	1923.	1924.	1925.	1926.
	£	£	£	£
Government and municipal securities ..	49,261,981	52,967,836	55,512,895	60.354,135
Mortgages	19,546,248	21,066,410	22,521,893	24.146,487
Loans on companies' policies	8,138,547	9,156,489	9,812,751	10.543,379
Railway debentures and stock ..	504,548	812,998	935,207	986,980
Landed and house property	3,576,368	3,472,159	3,605,283	4,081,973
Life interests and reversions	131,565	138,730	148,447	149,555
Other investments	1,209,171	1,474,049	1,512,833	1,631,647
Outstanding premiums	714,157	742,614	772,918	879,137
Outstanding interest, dividends, and rents	783,755	861,471	895,096	974,735
Cash	1,256,994	2,357,630	2,138,263	2,131,936
Establishment and organization accounts	693,484	796,095	1,016,751	1,221,472
All other assets	2,282,198	1,613,216	1,709,996	1,923,921
Total Australian assets	88,099,016	95,459,697	100,582,333	109,025,348

(iii) *Total Assets.* It has been thought advisable to restrict the figures relating to life assurance to business in Australia. Several of the companies whose head offices are in Australia transact, however, a large amount of business elsewhere, viz., in New Zealand, in South Africa, and in the United Kingdom, while in the case of the foreign companies, the Australian business is insignificant compared with that done elsewhere. Particulars as to this foreign business of both Australian and foreign companies will be found in "Finance Bulletin No. 18" (published by this Bureau), and a short table only is inserted here, showing the total assets of the various companies. The decrease in the total assets in 1923 and 1926 is due to the purchase by Australian companies of the Australian business of the Equitable Life Assurance Society of United States and of the New York Life Insurance Company.

LIFE ASSURANCE COMPANIES.—TOTAL ASSETS, 1923 TO 1926.

Heading.	Amount.			
	1923.	1924.	1925.	1926.
	£	£	£	£
Government and municipal securities	144,837,468	142,684.880	106,982,929	112.395,155
Mortgages	101,969,269	114,888,595	58,813,526	64,701.335
Loans on companies' policies . .	65,091,066	66,748,612	34,013,687	36,604.250
Railway debentures and debenture stock	136,685,044	142,239,598	77.339,213	85.069.487
Landed and house property . .	10,190,544	9,812,306	8,461,054	8,906.600
Life interests and reversions . .	339.294	350,910	379.477	376.949
Other investments	2,057.446	7,299,239	3,854,031	5,177.764
Outstanding premiums	6,621,985	7,039,200	5,270,428	5,633,744
Outstanding interest, dividends, and rent	6,323,469	6,792,303	3,550,668	3,793,668
Cash	5,114,661	6,153,494	5,306,790	4,116,810
Establishment and organization accounts	703.834	796,095	1,016,751	1,226.095
All other assets	4,241,335	3,996.897	2,668,233	1,689.730
Total assets . .	484,175.415	508,802,129	307,656,787	329,691,587

6. New Policies issued in Australia, 1926.—(i) *Ordinary Business.* During 1926, 84,002 new policies were issued for £31,451,809. The average amount per policy was £374, which compares with an average of £293 per policy for all policies which were in existence in 1926.

(ii) *Industrial Business.* New policies to the number of 278,865 were issued during the year for a total of £13,701,235. The average per policy was £49, which is 25 per cent. more than the average for all industrial policies which were current in 1926.

7. Policies Discontinued in Australia, 1924, 1925 and 1926.—(i) *Ordinary Business.* The volume of business which from various causes becomes void in each year is always large. The number and amount of policies discontinued in 1924, 1925 and 1926, and the reasons for discontinuance are given in the following table :—

ORDINARY LIFE ASSURANCE.—POLICIES DISCONTINUED IN AUSTRALIA, 1924 TO 1926.

Mode.	1924.		1925.		1926.	
	No. of Policies.	Amount.	No. of Policies.	Amount.	No. of Policies.	Amount.
		£		£		£
Death or maturity . .	14,348	3,101,543	14,516	3,193,285	15,248	3,494,636
Surrender	15,697	3,430,204	17,346	3,628,783	20.857	4,407,146
Forfeiture	34,139	9,945,305	33,345	9,788,132	35,107	10,607,440
Total . .	64,184	16,477,052	65,207	16,610,200	71,212	18,509,222

(ii) *Industrial Business.* The number of policies discontinued in this branch each year is also very large. Of the total amount of discontinuance during 1926 only 11 per cent. was due to death or maturity, while 85 per cent. was due to forfeiture.

INDUSTRIAL LIFE ASSURANCE.—POLICIES DISCONTINUED IN AUSTRALIA, 1924 TO 1926.

Mode.	1924.		1925.		1926.	
	No. of Policies.	Amount.	No. of Policies.	Amount.	No. of Policies.	Amount.
		£		£		£
Death or maturity ..	31,385	701,722	35,188	775,695	41,778	935,690
Surrender	6,596	327,879	6,905	313,342	7,339	343,432
Forfeiture	133,984	6,649,206	148,037	7,324,709	144,802	7,166,472
Total ..	171,965	7,678,807	190,130	8,413,746	193,919	8,445,594

8. **Conspectus of Australian Life Assurance Legislation.**—A conspectus of Australian Life Assurance Legislation appeared in Official Year Book No. 18, pp. 1041 to 1059, but considerations of space preclude its insertion in the present issue.

§ 6. Fire, Marine, and General Insurance.

1. **Australasian Business.**—(i) *General.* Returns are available showing the revenue and expenditure, assets and liabilities, and investments of 42 insurance companies having their head offices either in Australia, New Zealand, or Fiji.

(ii) *Revenue and Expenditure.* The most important items of revenue and expenditure are given below. The trade surplus in 1922-23 was abnormally low, representing only 1.70 per cent. of premium income. For 1926-27 the surplus was £815,444, or 9.67 per cent. of premium income.

FIRE, MARINE, AND GENERAL INSURANCE COMPANIES.—SUMMARY OF REVENUE AND EXPENDITURE, 1923 TO 1927.

Heading.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
Premiums, less re-insurances ..	5,740,063	6,083,246	6,558,823	7,249,917	8,432,000
Losses	3,378,013	3,345,408	3,452,351	3,993,076	4,881,671
Expenses, commission, and taxes	2,264,598	2,319,513	2,414,946	2,614,007	2,727,885
Trade surplus..	97,452	418,325	691,526	642,834	815,444
Interest, rent, etc.	515,487	608,823	680,875	682,957	756,897
Total surplus	612,939	1,027,148	1,372,401	1,325,791	1,572,341
Dividends and bonuses paid ..	461,940	523,982	590,412	620,812	607,961
Ratio to premium income of—					
(*a*) Losses .. per cent.	58.85	54.99	52.64	55.08	57.98
(*b*) Expenses, etc. .. per cent.	39.45	38.13	36.82	36.05	32.35
(*c*) Trade surplus .. per cent.	1.70	6.88	10.54	8.87	9.67

(iii) *Liabilities and Assets.* The liabilities and assets for the same period are set out in the following tables. Comparison of the results for 1926–27 with those for 1922–23 shows that paid-up capital increased by 23 per cent. and reserves by 56 per cent. While loans on mortgage decreased by 20 per cent., Government securities increased by 47 per cent., and landed and other property showed a growth of over 42 per cent.

FIRE, MARINE, AND GENERAL INSURANCE COMPANIES, 1923 TO 1927.

Heading.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
PAID-UP CAPITAL, RESERVES, AND LIABILITIES.					
	£	£	£	£	£
Paid-up capital	5,100,651	5,688,108	5.851,076	6.131,149	6,292,050
Reserves and re-insurance funds(*a*)	5,530,537	6,099,482	6,784,411	7,401.536	8,637.831
Undivided profits	455,992	608,361	645,024	664,181	706.528
Losses unsettled	861,973	828,398	852,267	913.982	987.670
Sundry creditors, etc.	1,815,836	1,914,873	2,216,401	2,436.815	2,309.610
Dividends, etc., to pay.. ..	326,287	326,047	350,057	384.029	384.006
Life assurance funds (*b*) ..	947,669	1,390,170	1,867,294	2,208,553	1,436,372
Total liabilities ..	15,038,945	16,855,439	18,566,530	20,140,245	20,754,067
INVESTMENTS AND OTHER ASSETS.					
	£	£	£	£	£
Loans on mortgage	908,972	841,059	1,017,259	1,175,228	727.850
Government securities, etc. ..	8,177,285	9,283.301	10,231,706	10,989.880	12,004.751
Landed and other property ..	2,001,155	2,454.598	2,644.736	2,908,637	2,841.654
Fixed deposit, etc.	1,119,008	1,308,128	1,403,416	1,467,234	1,929.271
Loans on life policies (*b*) ..	18,844	34,631	46,989	60,533	62,451
Investments	98,630	89,721	121,363	165,153	139.055
Cash and bills receivable ..	706,739	819,536	868,604	899,232	763,272
Sundry debtors and other assets..	2,008,312	2,024,465	2,232.463	2,474,348	2,285.763
Total assets ..	15,038,945	16,855,439	18,566,530	20,140,245	20,754,067

(*a*) Including amount required as reserves against unexpired risks.
(*b*) Some of the companies transact Life Business.

(iv) *Marine Insurance.* Separate returns regarding this branch of insurance are not available. Act No. 11 of 1909, "An Act relating to Marine Insurance," passed by the Commonwealth Parliament, and assented to on the 11th November, 1909, altered the conditions under which marine policies had up till then been issued.

§ 7. Friendly Societies.

1. General.—Friendly societies are an important factor in the social life of the community, as probably one-third of the total population of Australia comes either directly or indirectly under their influence. Their total membership exceeds 560,000, but as certain benefits, such as medical attendance and free medicines, and in many cases funeral expenses, are granted to members' families as well as to members themselves, this figure must, even when due allowance is made for young and unmarried members, be multiplied by about four to arrive at the total number of persons more or less connected with these societies. Legislation has conferred certain privileges on friendly societies, but, on the other hand, it insists on their registration, and it is the duty of the Registrars in the various States, prior to registering a new society, to see that its proposed rules are conformable to the law, and that the scale of contribution is sufficiently high to enable the promised benefits to be conferred on members. Societies are obliged to forward annual returns as to their membership and their finances to the Registrar, and reports are published in most of the States dealing with the returns thus received.

In the following tables the figures for South Australia and Tasmania are for the calendar year 1926, while those for the other States relate to the fiscal year 1925–26.

2. Number of Societies, Lodges, and Members.—The number of different societies and lodges, the total number of benefit members at the end of the year, and their average number during the year are shown in the following table :—

FRIENDLY SOCIETIES.—SOCIETIES, LODGES, AND MEMBERS, 1926.

State.	Number of Registered Friendly Societies.	Number of Lodges.	Benefit Members at end of year.	Average No. of Benefit Members during the year.
New South Wales (1925–26) ..	34	2,307	216,268	212,650
Victoria (1925–26)	62	1,467	157,820	156,599
Queensland (1925–26) ..	18	(*a*) 565	65,204	63,757
South Australia (1926) ..	17	673	77,791	76,843
Western Australia (1925–26) ..	14	339	22,225	21,782
Tasmania (1926)	20	183	24,614	24,551
Total	..	5,534	563,922	556,182

(*a*) Excluding Juvenile Branches.

With regard to the number of registered Friendly Societies no total is given for Australia, since many of the societies operate in all the States.

3. Sickness and Death Returns.—Sick pay is generally granted for a number of months at full rates, then for a period at half rates, and in some societies is finally reduced to quarter rates. The following table shows the total number of members who received sick pay during the year, the number of weeks for which they received pay in the aggregate, and the average per member sick, and further the number of benefit members who died during the year, together with the proportion of deaths per thousand average members :—

FRIENDLY SOCIETIES.—SICKNESS AND DEATH RETURNS, 1926.

State.	Number of Members who received Sick Pay.	Total Number of Weeks Sick Pay Granted.	Average Number of Weeks per Member Sick.	Deaths of Benefit Members and Wives.	Proportion of Deaths to 1,000 Average Benefit Members.
New South Wales ..	(*a*)	(*a*)	(*a*)	(*a*)	(*a*)
Victoria (1925–26) ..	30,786	281,377	9.14	1,971	12.59
Queensland (1925–26) ..	12,557	91,145	7.26	566	8.88
South Australia (1926) ..	13,902	135,792	9.76	1,008	13.12
Western Australia (1925–26)	3,911	28,793	7.36	146	6.70
Tasmania (1926)	4,670	41,555	8.90	317	12.91
Total (*b*)	65,826	578,662	8.79	4,008	11.67

(*a*) Not available. (*b*) Exclusive of New South Wales

4. Revenue and Expenditure.—(i) *Revenue.* The financial returns are not prepared in the same way in each State, but an attempt has been made in the subjoined table to group the revenue under the main headings :—

FRIENDLY SOCIETIES.—REVENUE, 1926.

State.	Entrance Fees, Members' Contributions, and Levies.	Interest, Dividends, and Rents.	All other Income.	Total Revenue.
	£	£	£	£
New South Wales (1925–26)..	766,772	172,039	61,850	1,000,661
Victoria (1925–26)	523,403	221,814	75,333	820,550
Queensland (1925–26) ..	232,201	74,725	(*a*)	306,926
South Australia (1926) ..	231,391	110,199	24,034	365,624
Western Australia (1925–26)..	65,997	22,707	39,158	127,862
Tasmania (1926)	83,884	18,676	11,513	114,073
Total	1,903,648	620,160	211,888	2,735,696

(*a*) Included in interest, dividends, and rents.

(ii) *Expenditure.* The returns relating to expenditure are more complete than those for revenue. The figures show that the excess of revenue for the year was £586,908 for Australia. The revenue exceeded the expenditure by more than one pound per average benefit member.

FRIENDLY SOCIETIES.—EXPENDITURE, 1926.

State.	Sick Pay.	Medical Attendance and Medicine.	Sums Paid at Death of Members and Members' Wives.	Administration.	All other Expenditure.	Total Expenditure.
	£	£	£	£	£	£
New South Wales (1925-26)	269,768	307,380	65,913	148,808	35,376	827,245
Victoria (1925–26) ..	180,074	210,224	33,522	101,224	80,914	605,958
Queensland (1925–26) ..	65,234	91,355	28,026	48,320	(*a*)	232,935
South Australia (1926) ..	81,883	81,124	32,014	48,609	29,404	273,034
Western Australia (1925-26)	19,928	24,984	7,752	23,443	35,826	111,933
Tasmania (1926) ..	28,189	26,829	16,387	17,544	8,734	97,683
Total ..	645,076	741,896	183,614	387,948	190,254	2,148,788

(*a*) Included in administration.

It appears from the above figures that sick pay averaged about 23s. per week, but, as the returns include pay at half and quarter rates, and as the proportion of these to full rates is not stated, the average given must be taken for what it is worth. Medical attendance and medicine came to about 27s. per average benefit member.

5. **Funds.**—The two foregoing tables show that the surplus of revenue over expenditure in all States amounted to £586,908 for the year, and a small surplus must, of course, result annually in every society which levies adequate contributions to enable it to meet all possible claims. These accumulations of profits are generally invested, and the subjoined table shows the division into invested and uninvested funds :—

FRIENDLY SOCIETIES.—FUNDS, 1926.

State.	Invested Funds.	Uninvested Funds.	Total Funds.
	£	£	£
New South Wales (1925–26)	3,215,470	(*a*)	3,215,470
Victoria (1925–26)	4,199,714	80,686	4,280,400
Queensland (1925–26)	1,400,352	4,948	1,405,300
South Australia (1926)	2,012,185	25,615	2,037,800
Western Australia (1925–26)	384,033	(*a*)	384,033
Tasmania (1926)	341,939	17,817	359,756
Total	11,553,693	129,066	11,682,759

(*a*) Included in Invested Funds.

The total funds amounted, therefore, to over £20 14s. per member at the close of the year under review.

§ 8. Probates.

1. **Probates and Letters of Administration.**—The value of the estates left by deceased persons gives some idea of the distribution of property among the general population. There were in 1926 approximately 44,000 deaths of adult persons, while the number of probates and letters of administration granted during the same period

was 17,050. It would therefore appear that about two-fifths of the adults who died during the year were possessed of sufficient property to necessitate the taking out of probate. The details for each State are shown in the table hereunder :—

PROBATES AND LETTERS OF ADMINISTRATION, 1926.

States and Territory.	Number of Estates.			Net Values of Estates.		
	Probates.	Letters of Adminis-tration.	Total.	Probates.	Letters of Adminis-tration.	Total.
				£	£	£
New South Wales (*b*)	6,909	(*a*)	6,909	18,390,924	(*a*)	18,390,924
Victoria	4,153	1,710	5,863	14,313,367	(*a*)	14,313,367
Queensland (*b*) ..	762	135	897	3,095,486	272,298	3,367,784
South Australia ..	1,506	194	1,700	3,902,822	127,329	4,030,151
Western Australia ..	773	323	1,096	1,756,033	141,506	1,897,539
Tasmania ..	478	79	557	1,361,398	51,145	1,412,543
Northern Territory (*b*)	15	13	28	9,088	1,158	10,246
Total ..	14,596	2,454	17,050	42,829,118	593,436	43,422,554

(*a*) Included with Probates (*b*) For year ended 30th June, 1926.

2. **Intestate Estates.**—The number of intestate estates placed under the control of the Curator during the year, and the amount of unclaimed money paid into Consolidated Revenue in each State during the year 1926, are given hereunder :—

INTESTATE ESTATES, 1926.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Total.
Intestate estates placed under control of Curator during 1926—								
Number	(*a*)	(*b*)	1,343	272	309	(*b*)	13	(*c*) 1,937
Value .. £	(*a*)	(*b*)	749,004	151,890	33,742(*d*)	(*b*)	712	(*c*) 935,348
Unclaimed money paid into Consolidated Revenue by Curator during 1926 .. £	136,153	6,578	16,754	3,500	2,847	..	314	166,146

(*a*) Included with Probates. (*b*) Not available.
(*c*) Excluding New South Wales, Victoria and Tasmania. (*d*) Gross Value.

F.—PRIVATE WEALTH OF AUSTRALIA, 1925.

§ 1. Introductory.

1. **General.**—Of the various methods of estimating the wealth of the community, the inventory method on which the present estimate is based is that which furnishes most readily a comprehensive view of the various classes of wealth constituting the aggregate. In this respect it has advantages which do not attach to either the succession (probate) method or the census method. The possibility of using it, however, is largely dependent on the existence of valuations of various kinds made for purposes other than the estimation of total wealth, as, for example, Local Government assessments, values of imports, values of plant and machinery engaged in various industries, etc. Further in certain of the items direct valuation is not possible, and estimates based on indirect data and general knowledge must be employed, as, for example, an estimate of the value of clothing based on the known number of persons, and an assumed value per head, or a valuation of furniture based on the number of houses of various sizes, or of various rental values. It is thus clear that, in common with all other estimates of wealth, the inventory method is involved in some measure of uncertainty, but it is doubtful

whether this is more marked than in the case of other methods. On the other hand, it has the advantages (i) that it enables a fair idea to be obtained of the degree of uncertainty involved in each item, (ii) that unlike a census it costs little to compile and can consequently be prepared at relatively short intervals, (iii) that it relates approximately to a definite point of time, whereas a "succession" estimate at its best, if it is to be at all reliable, can give only the average for an extensive period.

2. **Basis of Estimate.**—In the accompanying estimate, provision has been made for the inclusion of all material private wealth existing in Australia, whether owned by persons domiciled in Australia or by those resident abroad.

In all cases the values given represent material wealth actually existing in Australia at the date of review, viz., 30th June, 1925, and take no account of the domicile of the owner, nor of such mere evidences of proprietary interest as mortgage rights, debentures, bonds, policies, etc.

3. **Private Wealth.**—In broad outline the classes of private wealth contributing to the aggregate may be classed as follows:—(i) Land and Improvements; (ii) Live Stock; (iii) Agricultural, Dairying and Pastoral Implements and Machinery; (iv) Manufacturing Plant and Machinery; (v) Mining Properties (including plant and machinery); (vi) Coin and Bullion; (vii) Private Railways and Tramways; (viii) Shipping; (ix) Agricultural and Pastoral Products; (x) Locally-manufactured Products; (xi) Mining Products (other than gold); (xii) Imported Merchandise; (xiii) Clothing and Personal Adornments; (xiv) Furniture and Fittings, Books, etc.; (xv) Motor Vehicles; (xvi) Aircraft; and (xvii) Wireless.

§ 2. Land and Improvements.

1. **Nature of Estimate.**—The estimate in respect of this item is based on the municipal valuations of the several States and represents about two-thirds of the total estimated wealth. The form in which this information would be most serviceable is that of improved capital value, but particulars of this nature are continuously available only for the whole State in the cases of Victoria, Tasmania, and for the incorporated area of South Australia. Similar information in the cases of New South Wales and Western Australia is furnished for "municipalities," but the assessments for "shires" in New South Wales and for the majority of the "road districts" in Western Australia are upon an unimproved basis. In Queensland all the assessments are based upon unimproved values, while in a few of the Western Australian road districts the figures given relate to "annual values." It is thus necessary in several cases to apply certain factors for the purpose of converting "unimproved" and "annual values" into the corresponding "improved capital values."

2. **New South Wales.**—The valuation of the municipalities of New South Wales for the year ended 31st December, 1925, furnished the following results:—

NEW SOUTH WALES.—VALUATION OF MUNICIPALITIES FOR YEAR ENDED 31st DECEMBER, 1925.

Municipalities.	Improved Capital Value.	Unimproved Capital Value.	Assessed Annual Value.	Percentage of Unimproved on Improved Capital Value.	Percentage of Assessed Annual Value on Improved Capital Value.
	£	£	£	%	%
City of Sydney ..	151,367,380	45,656,053	6,811,532	30.16	4.50
Metropolitan Municipalities	224,305,050	76,429,364	16,928,921	34.07	7.55
Country Municipalities	96,326,731	31,893,376	7,324,409	33.11	7.60
Total Municipalities..	471,999,161	153,978,793	31,064,862	32.62	6.58

In the New South Wales Statistical Register for 1925–26 (p. 176), from which the valuation figures given above have been taken, the following definitions of the three classes of valuation are furnished :—

> "The *Unimproved Capital Value* is the amount which the fee-simple estate in such land is worth under such reasonable conditions as a *bona fide* seller would require, assuming the actual improvements had not been made."
>
> "The *Improved Capital Value* is the amount which the fee-simple estate of the land is worth, with all improvements and buildings thereon."
>
> "The *Assessed Annual Value* is nine-tenths of the fair average rental of land with improvements thereon."

The total area embraced by these municipalities is 2,520 square miles, or less than 1 per cent. of the total area of the State, while the population contained therein represented 69 per cent. of the total population of the State.

With the exception of a portion of the sparsely-populated Western Land Division and the Murrumbidgee Irrigation Area, the remainder of the State is divided into shires, which cover a total area of 181,590 square miles, or 59 per cent. of the whole area of the State, the population of this portion representing about 30 per cent. of the total for the State. The unincorporated portion covers an area of 125,322 square miles, or 40 per cent. of the area of the State. Its population, however, is little more than ½ per cent. of the total population of New South Wales.

As regards shire valuations for 1925, the unimproved capital value is available in all cases, and aggregates £148,249,203. Improved capital values which are available for twelve shires aggregate £42,952,975, the unimproved values for the same shires totalling £19,832,990, or 46.17 per cent. of the corresponding improved values. In these cases, assessed annual values were also given, aggregating £2,418,181, or 5.63 per cent. of the improved value. On the assumption that the twelve shires, quoted above as giving a percentage of 46.17 for the ratio of unimproved to improved value, may be taken as a fair sample in this respect of the shires of New South Wales, the multiplier for converting the aggregate unimproved value for shires into the corresponding improved value will be 100 ÷ 46.17. Applying this factor, the improved capital value for shires works out at £321,068,288. It may be noted that the ratio of unimproved to improved capital value obtained at the War Census of 1915 for owners domiciled in New South Wales was 44.91 per cent.

In the case of the unincorporated portion of the Western Land Division, valuation data are not available, and an estimate has been made on the basis of the population of the unincorporated area taken in conjunction with the average unimproved value per head disclosed by the contiguous shires. These are the shires of Boomi, Walgett, Marthaguy, Bogan, Lachlan, Carrathool, Waradgery, Yanko, and Wakool, which, including the Murrumbidgee Irrigation Area, in 1925 had an aggregate population of 36,140, and an aggregate unimproved valuation of £13,707,180, or £379 per head. As the population of the unincorporated area of the Western Division in 1925 was about 14,600, the corresponding unimproved value would, on this basis, be £5,537,488. Particulars in respect of the ratio of "unimproved" to "improved" values are not available for this part of the State separately, but as it would be relatively high it has been taken at 60 per cent., giving an estimated improved value for the unincorporated area of £9,229,000.

Combining these results, the total for the State works out as follows :—

ESTIMATED IMPROVED CAPITAL VALUE.—NEW SOUTH WALES, 1925.

Municipalities.	Shires.	Unincorporated Area.	Total.
£471,999,000	£321,068,000	£9,229,000	£802,296,000

This total represents an average of £353 per head of the population of the State at 30th June, 1925.

On the basis of the statistics and estimates here employed, the unimproved value of land for the whole of New South Wales at 30th June, 1925, represented 38.4 per cent. of the improved capital value.

3. **Victoria.**—In the case of Victoria, the particulars available relate to improved capital values, and to annual values also for all local government areas. The figures for 1924–25 are as follows :—

VICTORIA.—LOCAL GOVERNMENT VALUATIONS FOR YEAR 1924-25.

Local Government Districts.	Improved Capital Value.	Annual Value.	Percentage of Annual Value on Improved Capital Value.
	£	£	%
Cities, Towns, and Boroughs ..	288,230,793	16,388,842	5.69
Shires	251,480,405	12,588,177	5.01
Total	539,711,198	28,977,019	5.37

With the exception of French Island and Sandstone Island in Western Port Bay, the whole of Victoria is under local government. The total given above (in round numbers £539,711,000) may consequently be taken as fairly representing the total value of real property and improvements for 30th June, 1925. It averages £323 per head of the population of the State at that date.

4. **Queensland.**—The municipal valuations for Queensland relate solely to unimproved capital values, and are separately available for the year 1925 for the 12 cities, 23 towns, and 135 shires which comprise the whole area of the State, with the exception of Stradbroke Island and other islands in Moreton Bay. The particulars are as follows :—

UNIMPROVED VALUES.—QUEENSLAND, 1925.

Cities.	Towns.	Shires.	Total.
£17,038,276	£4,842,149	£52,059,980	£73,940,405

In the absence of any valuation data for Queensland indicating the relation between " unimproved " and " improved " values, use has been made of the ratio for that State obtained from a comparison of the War Census data. The ratio so obtained for owners of freehold property who were domiciled in Queensland was approximately 48 per cent. This ratio relates to the State as a whole, and in view of the varying ratios given above for municipalities and shires in New South Wales, it would clearly be inadmissible to apply the factor separately to the figures for cities, towns, and shires in the preceding table. Applying it to the total of £73,940,405 gives the improved capital value for Queensland as £154,043,000, averaging £180 per head of the population of the State at 30th June, 1925.

5. **South Australia.**—In the case of South Australia the improved capital values and the annual values of all rateable property for the year 1925 are given separately for the several corporations and district councils. The details are as follows :—

SOUTH AUSTRALIA.—LOCAL GOVERNMENT VALUATIONS, 1925.

Local Government Districts.	Improved Capital Value.	Annual Value.	Percentage of Annual Value on Improved Capital Value.
Metropolitan—	£	£	%
Municipal Corporations	56,009,453	2,771,039	4.95
District Councils	26,227,080	1,311,354	5.00
Country—			
Municipal Corporations	9,541,279	529,009	5.54
District Councils	59,381,452	2,969,021	5.00
Total	151,159,264	7,580,423	5.01

Of the several Australian States, South Australia has by far the largest unincorporated area. Thus, while corporations account for 101 square miles, and district councils for 48,474 square miles, the unincorporated area amounts to no less than 331,495 square miles, or 87 per cent. of the whole area of the State. This area is, however, very sparsely populated, and much of it is entirely unoccupied. At the Census of 1921 the total population of the unincorporated portion of the State was only 16,193 persons, or about 3¼ per cent. of the total population of the State. In the area under country district councils for 1925, the average improved capital value of rateable property per head of population was approximately £326. Assuming this average to be applicable to the unincorporated area, and taking the population of that area at 16,000 for 1925, the estimated improved capital value for this portion of the State may be set down at £5,223,000.

The total for South Australia may thus be given as follows :—

IMPROVED CAPITAL VALUE.—SOUTH AUSTRALIA, 1925.

Municipal Corporations.	District Councils.	Unincorporated Area.	Total.
£65,551,000	£85,608,000	£5,223,000	£156,382,000

This total gives an average of £288 per head of the population of the State at 30th June, 1925.

6. Western Australia.—In this State the valuations of the municipalities are available in respect of what are termed "Capital Value, including improvements," and "Net Annual Value." The totals for the year ended 31st October, 1925, are as follows :—

WESTERN AUSTRALIA.—MUNICIPAL VALUATIONS, 1925.

Districts.	Capital Value, including Improvements.	Net Annual Value.	Percentage of Net Annual Value on Improved Capital Value.
	£	£	%
Metropolitan Municipalities ..	30,423,333	1,597,296	5.25
Extra-Metropolitan	4,891,983	385,671	7.88
Total, Municipalities ..	35,315,316	1,982,967	5.62

In the case of the Road Districts which correspond approximately to the shires in some other States, rates are levied in part on "annual values," but mainly on "unimproved values," both bases being used in many districts. For the whole State the "annual values" recorded for the year ended 30th June, 1925, were £309,075, while the "unimproved values" for the same year totalled £18,444,720. As indicated in the preceding table, the ratio of "net annual value" to "improved capital value" works out at 7.88 per cent. for extra-metropolitan municipalities in Western Australia, but this ratio is certainly too high in the case of road districts. In the case of New South Wales the ratio for country municipalities was 7.60 per cent., while that ascertained for twelve shires for which the information was available was 5.63 per cent., or about one-fourth less. Assuming the same relation to hold between the extra-metropolitan municipalities and the road districts in Western Australia, the appropriate percentage would be three-fourths of 7.88, or 5.84. It was consequently decided to take 6 per cent. as fairly applying to the case. At the War Census of 1915 the ratio of "unimproved" to "improved" capital value in respect of property owners domiciled in Western Australia was 40.55; as this was based on a combination of town and country properties, it is probably too low for use in connexion with country properties only. The factor to be applied in converting the "unimproved values" quoted above into "improved values" has consequently been based upon a ratio of 45 per cent. As a result of these computations the "improved capital value" for road districts has been estimated at £46,140,000. Combining these results the total for Western Australia may be stated as follows, the whole of the State being incorporated :—

IMPROVED CAPITAL VALUE.—WESTERN AUSTRALIA, 1925.

Municipalities.	Road Districts.	Total.
£35,315,000	£46,140,000	£81,455,000

This total represents an average of £221 per head of the population of the State at 30th June, 1925.

7. **Tasmania.**—For the purposes of local government, Tasmania is divided into 49 municipalities. The municipal valuations available relate to "annual values" only, but State Government valuations show total capital and unimproved values as follows :—

TASMANIA.—GOVERNMENT VALUATION OF PROPERTY, 1925.

State Government Valuations.				
Total Capital Value.	Unimproved Value.	Percentage of Unimproved Value on Total Capital Value.	Municipal Annual Value.	Percentage of Annual Value on Total Capital Value.
		%		%
£49,300,516	£22,733,953	46.11	£2,621,913	5.32

The total capital value is equal to £233 per head of the population at 30th June, 1925.

8. **Territories.**—Owing to their exceptional conditions, the Northern and the Federal Capital Territories furnish no data relative to local government corresponding to that quoted above in respect of the several States. Their omission from the estimate for Australia would not seriously affect the total, but for the sake of completeness it appears desirable to include them. It has consequently been deemed appropriate to compute a figure based upon the population in each case, and taking an average value per head suggested by the State estimates. In the Northern Territory the population at 30th June, 1925, was 3,768, while the corresponding figure for the Federal Capital Territory was 4,970. The average values per head of population at 30th June, 1925, disclosed above for the several States are as follows :—New South Wales, £353 ; Victoria, £323 ; Queensland, £180 ; South Australia, £288 ; Western Australia, £221 ; and Tasmania, £233. In view of these averages it will probably be within the mark to assume an average of £170 per head for the Territories. This will give approximately £640,000 for the Northern Territory, and £845,000 for the Federal Capital Territory.

9. **Australia.**—Combining the results obtained in foregoing sub-sections, the results for the Commonwealth may be stated as follows in thousands of pounds :—

IMPROVED CAPITAL VALUE.—AUSTRALIA, 1925.

N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	F.C.T.	Australia.
£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.
802,296	539,711	154,043	156,382	81,455	49,301	640	845	1,784,673

For Australia as a whole the average value per head of the population at 30th June, 1925, was £301.

§ 3. Live Stock.

1. **Numbers of Principal Classes.**—Particulars concerning the value of live stock in the several States are not directly available, but the numbers of each of the principal classes and some of the minor classes are collected annually in each State and Territory. The dates to which these records relate are not uniform, but in each case the figures used for the present purpose refer to a point of time between 31st December, 1924, and 30th June, 1925. The figures so taken for the principal classes of stock are as follows :—

NUMBERS OF PRINCIPAL CLASSES OF AUSTRALIAN LIVE STOCK, 1924-25.

Kind of Stock.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	F.C.T.	Aust.
Horses ..	646,110	473,236	659,023	255,022	175,116	37,091	45,059	1,393	2,292,050
Cattle ..	2,871,196	1,605,554	6,454,653	400,423	891,564	225,740	855,285	5,058	13,309,473
Sheep ..	46,934,210	12,649,898	19,028,252	6,359,240	6,396,564	1,614,085	6,914	165,790	93,154,953
Pigs ..	339,378	288,509	156,163	80,988	66,375	47,305	1,000	291	980,009

2. **Basis of Valuation.**—In order to arrive at a valuation of this live stock it was decided to apply mean values taken from recorded average market prices for each State. The values so adopted were as follows :—

VALUES ADOPTED FOR VALUATION OF LIVE STOCK.

Kind of Stock.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	F.C.T.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Horses ..	11 0 0	14 8 0	6 10 0	9 10 0	20 0 0	24 10 0	6 10 0	11 0 0
Cattle ..	4 4 0	7 16 0	4 5 0	6 13 6	12 0 0	8 0 0	4 5 0	4 4 0
Sheep ..	1 10 3	1 12 5	1 0 0	1 14 9	1 16 0	1 9 0	1 0 0	1 10 3
Pigs .	1 17 6	1 17 6	2 0 0	2 13 0	1 14 0	1 14 0	1 17 6	1 17 6

3. **Estimated Value of Principal Classes.**—On the basis of these rates the values obtained for the classes of stock quoted were as follows :—

VALUATION OF PRINCIPAL CLASSES OF AUSTRALIAN LIVE STOCK, 1924-25.

Kind of Stock.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	F.C.T.	Aust.
	£	£	£	£	£	£	£	£	£
Horses	7,107,210	6,814,598	4,283,650	2,422,709	3,502,320	908,730	292,884	15,323	25,347,424
Cattle	12,059,023	12,523,321	27,432,275	2,672,824	10,698,768	1,805,920	3,634,961	21,244	70,848,336
Sheep	70,987,993	20,503,376	19,028,252	11,049,180	11,513,815	2,340,423	6,914	250,757	135,680,710
Pigs	636,334	540,954	312,326	214,618	112,838	80,419	1,875	546	1,899,910
Total	90,790,560	40,382,249	51,056,503	16,359,331	25,827,741	5,135,492	3,936,634	287,870	233,776,380

For Australia as a whole these values average £11 1s. 2d. per head for horses, £5 6s. 6d. per head for cattle, £1 9s. 2d. per head for sheep, and £1 18s. 9d. per head for pigs.

4. **Minor Classes.**—(i) *Poultry.*—Of the minor classes of live stock, poultry is the most important, but in this case the records are very incomplete. It was ascertained in the year 1911 that the total value of poultry in Victoria amounted to 36 per cent. of the value of poultry and eggs produced in the State during that year, and in connexion

with the present estimate it is assumed that the value of poultry in each State at 30th June, 1925, also amounted to 36 per cent. of the value of poultry and eggs produced in the year 1924–25. On this basis the value obtained for the poultry was as follows :—

ESTIMATED VALUE OF POULTRY AS AT 30th JUNE, 1925.

N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
£	£	£	£	£	£	£
981,720	1,557,466	191,082	413,396	103,086	108,000	3,354,750

(ii) *Other.*—The other kinds of domestic live stock in Australia are relatively unimportant, and consist mainly of goats, camels, mules, and donkeys. For the purposes of the present estimate the values of these have been taken at 7s. 6d. per head for goats, £16 per head for camels, £15 per head for mules, and £6 per head for donkeys. On this basis the values for the several States and Territories are as follows :—

ESTIMATED VALUE OF GOATS, CAMELS, MULES, AND DONKEYS, 1924-25.

N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Aust.
£	£	£	£	£	£	£	£
17,600	2,507	71,988	102,127	182,525	775	34,750	412,272

5. **Total Values.**—A combination of the foregoing results gives a total for Australia as follows :—

ESTIMATED TOTAL VALUE OF AUSTRALIAN LIVE STOCK, 1924-25.

N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	F. C. Ter.	Aust.
£1,000.	£1,000,	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.
91,790	41,942	51,320	16,875	26,113	5,244	3,971	288	237,543

The total for Australia represents an average of £40 1s. 3d. per head of the population at 30th June, 1925.

§ 4. Agricultural, Dairying, and Pastoral Implements and Machinery.

1. **Details Recorded.**—In all the States and Territories except Victoria returns are furnished annually showing separately the value of implements and machinery (i) used mainly in general agriculture, (ii) used mainly in dairying, (iii) used mainly in pastoral pursuits, and (iv) travelling machinery.

The figures so available, and the relation of these values (i) to the area under cultivation, in the case of agricultural and travelling implements and machinery, (ii) to the number of dairy cattle, in the case of dairying implements and machinery, and

(iii) to the number of sheep, in the case of pastoral implements and machinery, are given in the following table :—

VALUES OF AGRICULTURAL, DAIRYING AND PASTORAL IMPLEMENTS AND MACHINERY, 1924.

State or Territory.	Agricultural Implements and Machinery.		Dairying Implements and Machinery.		Pastoral Implements and Machinery.		Travelling Machinery.	
	Total Value.	Value per 100 Acres under Crop.	Total Value.	Value per 100 Head of Dairy Cattle.	Total Value.	Value per 1,000 Head of Sheep.(*a*)	Total Value.	Value per 100 Acres under Crop.
	£	£ s. d.	£	£ s. d.	£	£ s. d.	£	£ s. d.
New South Wales	9,421,300	191 15 11	1,119,156	134 2 0	4,099,337	64 16 8	100,694	2 1 0
Queensland ..	3,705,430	346 7 1	810,939	138 13 0	1,712,640	25 19 1	156,755	14 13 1
S. Australia ..	5,946,697	167 3 3	224,834	168 3 4	495,588	58 6 11	8,330	0 4 8
W. Australia ..	3,741,891	138 0 8	77,810	127 16 1	710,769	54 10 0	146,598	5 8 2
Tasmania ..	547,642	207 10 10	108,461	154 15 8	50,576	17 13 9	97,600	36 19 9
N. Territory ..	650	190 1 2	..	..	10,000	1 9 2	5,000	..
F.C. Territory ..	6,430	272 6 10	132	31 19 3	7,484	..	...	..
Australia (exclusive of Victoria) ..	23,370,040	186 14 2	2,341,332	139 0 0	7,086,394	44 2 1	514,977	4 2 4

(*a*) For the purposes of this return cattle have been converted into their equivalent in sheep by multiplying by eight.

2. **Estimate for Victoria.**—The travelling machinery shown in the foregoing table being mainly agricultural, its total value has been shown in relation to the area under crop. As the conditions in respect of agricultural, dairying, and pastoral pursuits in Victoria are probably more closely allied to those in New South Wales than to those in any other State, it has been assumed, for the purpose of estimating the total value for Victoria, that the values per 100 acres, etc., shown above for New South Wales are applicable to the appropriate data available for Victoria. On this basis the Victorian values for 1924 have been estimated as follows :—Agricultural, £9,132,000; dairying, £1,341,000; pastoral, £1,259,000; travelling, £98,000; total, £11,830,000.

3. **Aggregate for Australia.**—The aggregate for Australia for 1924 may therefore be estimated as follows :—

ESTIMATED VALUE OF AGRICULTURAL, DAIRYING AND PASTORAL IMPLEMENTS AND MACHINERY, 1924-25.

N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	F. C. Ter.	Aust.
£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.
14,740	11,830	6,386	6,676	4,677	804	16	14	45,143

The total for Australia represents an average of £7 12s. 3d. per head of population as at 30th June, 1925.

§ 5. Manufacturing Plant and Machinery.

1. **General.**—In all the States returns are collected and tabulated annually in respect of all factories, a factory being defined as an industrial establishment in which four or more persons are employed, or in which power other than hand-power is used whatever number of persons is employed. These returns include approximate values of plant and machinery employed in such factories, and the figures for 1924–25 have been used

for the purposes of the present estimate. As, however, these figures include the value of plant and machinery employed in Government ship and boat building and repairing works (£1,341,000), and the value of that employed in railway and tramway workshops (£4,204,000), which are mainly Government establishments, a deduction has been made of such values from the annual returns. The deduction is probably somewhat in excess for railway and tramway workshops, as some are private concerns, but the excess may be considered as a set-off to the non-inclusion of the values associated with other Government enterprises of a minor character.

2. **Adjusted Values.**—Allowing for the adjustments, alluded to above, the values for Australia are given in the following table :—

APPROXIMATE VALUE OF MANUFACTURING PLANT AND MACHINERY, 1924-25.

N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
£1,000.	£1,000.	£1,000.	£,1000.	£1,000.	£1,000.	£1,000.
39,893	31,695	13,758	7,216	4,500	6,637	103,699

The total for Australia represents £17 9s. 9d. per head of population as at 30th June, 1925.

§ 6. Mining Properties.

1. **Difficulties of Estimation.**—A reliable estimate of the value of mining properties in Australia is difficult to obtain. In connexion with the Wealth Census of 1915, a careful examination of the paid-up capital and the dividends of such companies operating as at 30th June, 1915, disclosed the fact that the paid-up capital as at that date totalled £45,874,366, and that the dividends reported for the year ended 30th June, 1915, were £1,354,805. A similar investigation in respect of the dividends for mines operating at 31st December, 1916, indicated that the total amount of the dividends paid during 1916 was £1,569,253. Writing under date December, 1913, Mr. R. L. Nash, in his "Australasian Joint Stock Companies Year-book, 1913–14," gives results for Australasia which, on the deduction of the figures stated or estimated as applicable to New Zealand, indicate for the Australian mining companies a paid-up capital of about £50,000,000, and an annual dividend of about £3,300,000, but the period to which the data relate is not stated. The figure so given for paid-up capital is only about 10 per cent. in excess of that indicated above, but the amount of dividends shown is much higher, exceeding by nearly 150 per cent. the amount computed for the year 1914–15, and by about 110 per cent. that computed for 1916. Probably the reduction in the amount of dividends was due in large measure to the dislocating effects of the war. In view of these facts, it was not deemed advisable to attempt a valuation based on the capitalization of the dividends, but the paid-up capital was taken with a deduction of 10 per cent., to allow for over capitalization, giving a valuation of £41,319,000 for 1915.

2. **Value of Mining Plant and Machinery.**—Approximate values of the mining plant and machinery of all the States except Tasmania are furnished annually by the respective State Departments of Mines. The figures given for the year 1925 for these States and for the Northern Territory are as follows, an estimate being included for Tasmania based upon returns showing the number of men employed, and the value of the output for the year :—

ESTIMATED VALUE OF MINING PLANT AND MACHINERY, 1925.

N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Aust.
£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£,1000.
7,961	672	2,327	623	1,751	850	24	14,208

3. **Value of Mineral Production.**—The total value of the mineral production of Australia is compiled annually by the Mines Departments of the several States, the results for the year 1925 being as follows :—

VALUE OF MINERAL PRODUCTION, 1925.

N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Aust.
£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.
16,658	1,001	2,012	1,028	2,394	1,478	22	24,593

4. **Earlier Estimates of Value of Mining Properties.**—In his estimate of the value of "mines and mining plant" for 1890, Sir T. A. Coghlan gave a total of £33,823,000, and for 1903 a total of £32,199,000. In his estimate for 1915, Sir George Knibbs gave £41,319,000, while the value deduced by the present writer for 1921 was £34,000,000, and for 1923, £36,698,000.

5. **Estimate for 1925.**—These various estimates suggest that a reasonable estimate giving a more or less appropriate distribution over the several States would be obtained by adding to the estimated value of mining plant and machinery the value of one year's mineral production. On this basis the estimated value of Mining Properties in Australia in 1925 works out as follows :—

ESTIMATED VALUE OF MINING PROPERTIES, 1925.

N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Aust.
£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.
24,619	1,673	4,339	1,651	4,145	2,328	46	38,801

The total for Australia represents an average of £6 10s. 11d. per head of the population at 30th June, 1925.

§ 7. Coin and Bullion.

1. **Location of Stocks.**—The principal supplies of coin and bullion in Australia are (*a*) those held by the cheque-paying banks, (*b*) those held by the Commonwealth Bank as Australian Note Reserve, (*c*) those held by the Mint, and (*d*) those in the hands of the public.

2. **Holdings by Cheque-paying Banks.**—As regards these bank holdings, returns are furnished quarterly by all the cheque-paying banks, showing for each State and the Northern Territory the average for the quarter of the weekly recorded holdings of coin and bullion. The means of such returns for the quarters ended 30th June and 30th September, 1925, respectively are as follows :—

CHEQUE-PAYING BANKS.—AVERAGE HOLDINGS OF COIN AND BULLION.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Aust.
	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.
Coin	13,176	9,858	2,308	1,756	1,780	605	3	29,486
Bullion	2,335	520	7	..	142	..	1	3,005
Coin and Bullion ..	15,511	10,378	2,315	1,756	1,922	605	4	32,491

The mean figures here given represent approximately the position at 30th June, 1925. As, however, they represent the face values of the several coins and the value in gold coin of the bullion held, they require to be adjusted by the application of appropriate factors representing the currency values of the coin and bullion concerned. At 30th June, 1925, the sovereign was back to parity with the paper currency and was worth £1. In the same year the cost to the Commonwealth Treasury of silver and bronze coin issued by it was 32.45d. per oz. in the case of silver and 8.604d. per lb. in the case of bronze. The face value of silver coin is 5s. 6d. per oz., hence the ratio of metallic value to face value is 0.492. On the assumption that the total amounts of pence and half-pence in circulation are equal in face value, bronze coins having a face value of £1 weigh approximately 5½ lb., hence the appropriate reduction factor in the case of bronze is about 0.197. Returns furnished by various banks as at 30th June, 1925, indicate that at that date the face value of the coin held by them was distributed in the following proportions:—Gold, 92.47 per cent.; silver, 7.12 per cent.; and bronze, 0.41 per cent. Taking these proportions in conjunction with the adjustment factors indicated above, the estimated banks' holdings of coin at 30th June, 1925, must be multiplied by 0.961 and the corresponding holdings of bullion, all of which is gold, by unity to reduce them to their equivalent metallic values in terms of currency.

After making the requisite calculations, the results obtained are as follows:—

ESTIMATED METALLIC VALUE OF COIN AND BULLION HELD BY THE CHEQUE-PAYING BANKS AT 30th JUNE, 1925.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Aust.
	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.
Coin	12,662	9,474	2,218	1,688	1,711	581	3	28,337
Bullion	2,335	520	7	..	142	..	1	3,005
Total ..	14,997	9,994	2,225	1,688	1,853	581	4	31,342

3. **Holdings by the Commonwealth Bank.**—The *Commonwealth Bank Act* 1920 authorized the establishment of a Note Issue Department of the Bank and the transfer to that department of the existing note issue made under the provisions of the *Australian Notes Act* 1910–14, the latter Act being repealed. The minimum gold reserve in connexion with the note issue is fixed at one-fourth of the amount of notes issued, and on 30th June, 1925, such reserve amounted to £25,841,027 face value, or 48 per cent. of the notes in circulation. The ratio of bullion value to face value of gold coin being unity at that date, the value of the reserve was £25,841,027.

4. **Holdings by the Mint.**—The amount held by the Mint at any given time is relatively unimportant. The accounts for the branches at Sydney, Melbourne, and Perth were made up to 31st December in each year, and showed in the "Bullion Account" the value of the bullion in store at the beginning and end of the year. For the purposes of the present estimate the mean of these for 1924 and 1925 has been taken as representing approximately the position at the 30th June, 1925.

The figures so obtained for that date for the several branches were as follow:—Sydney, £461,781; Melbourne, £8,749; Perth, £7,798.

5. **Coin in Circulation.**—As regards the value of coin held by the general public, there is very little definite information on which to base an estimate. Gold coin was withdrawn from circulation during the war and had not been re-issued in 1925. There is no doubt that a certain amount of hoarding of gold coin took place, but it is probable that the amount omitted by ignoring this item is not large. In the case of silver and bronze coin it was estimated in 1923 by the Deputy Master of the Melbourne branch of the Royal Mint that the amount then in circulation in Victoria had a face value of £680,812 in the case of silver coin, and of £80,379 in the case of bronze coin. These values average approximately 8s. 6d. and 1s. respectively per head of population. The total *per capita* was applied to the population of the several States and Territories as at 30th June, 1925, and an allowance was made based on the ratios of metallic to face values determined above.

On this basis the values obtained were as follows :—

ESTIMATED METALLIC VALUE OF SILVER AND BRONZE COIN HELD BY THE PUBLIC, 30th JUNE, 1925.

N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	F.C.T.	Aust.
£	£	£	£	£	£	£	£	£
497,442	365,833	187,249	118,917	80,580	46,397	825	975	1,298,218

6. **Summary.**—Combining these particulars, the value and distribution of coin and bullion work out approximately as follows :—

ESTIMATED METALLIC VALUE OF COIN AND BULLION IN AUSTRALIA, 30th JUNE, 1925.

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N. Ter.	F.C.T.	Aust.
	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.
Held by banks ..	14,997	9,994	2,225	1,688	1,853	581	4	..	31,342
Treasury note reserve	..	25,841	..	..	..	..	..	..	25,841
Held by Mint ..	462	9	..	..	8	..	..	..	479
In hands of public ..	497	366	187	119	81	46	1	1	1,298
Total ..	15,956	36,210	2,412	1,807	1,942	627	5	1	58,960

The total for Australia represents an average of £9 18s. 11d. per head of the population at 30th June, 1925.

§ 8. Private Railways and Tramways.

1. **Private Railways.**—In all the States, the principal lines of railway are owned and worked by the several Governments, and the majority of the tramways are under the control of either the Government of the State or of municipal authorities. There are, however, in Australia in addition to the Government railways some 2,850 miles of privately-owned lines, a large proportion of this mileage being used solely for special industrial purposes, such, for example, as coal lines in New South Wales, sugar lines in Queensland, and timber lines in Western Australia. Of the private lines used for general traffic, the most extensive are the Midland Railway (277 miles) in Western Australia, the Lucinda Point Railway (59¾ miles) in Queensland, the Emu Bay Railway (103 miles) in Tasmania, and the Silverton Tramway (36⅔ miles) in New South Wales.

2. **Private Tramways.**—Electric tramways are run by private companies at Ballarat, Bendigo, and Geelong in Victoria, and at Kalgoorlie in Western Australia. There is also a privately-owned steam tramway in New South Wales.

3. **Summary.**—In the absence of any valuations of the several private lines, the cost of construction has been taken as the value for the purposes of the present return and is as follows :—

ESTIMATED VALUE OF PRIVATE RAILWAYS AND TRAMWAYS, 1925.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.
Private Railways—							
General Traffic ..	2,804	87	866	215	2,065	1,310	7,347
Special Purposes	935	102	2,573	48	2,308	156	6,122
Private Tramways	5	376	..	..	452	..	833
Total ..	3,744	565	3,439	263	4,825	1,466	14,302

The total for Australia represents an average of £2 8s. 3d. per head of the population at 30th June, 1925.

§ 9. Shipping.

1. **Vessels on Australian Registers.**—Particulars in respect of vessels owned in Australia appear on the Australian Shipping Registers. A summary of information obtained in respect of the number and net tonnage as at 30th June, 1925, is given in the following table:—

VESSELS ON AUSTRALIAN REGISTERS AT 30th JUNE, 1925.

Particulars.	No.	Net Tonnage.	Average Tonnage per Vessel.
		Tons.	Tons.
Steam—			
Dredges and Tugs	96	3,289	34
Other Vessels	901	293,340	325
Sailing—			
Fitted with auxiliary power	328	8,805	26
Other Vessels	893	29,030	32
Barges, Hulks, Dredges, etc. (not self-propelled) ..	166	50,544	304
Total	2,384	385,008	161

2. **Average Value per Net Ton.**—For the purposes of the present estimate, a request was made to some of the leading ship-owners for an approximate value per net ton as at 30th June, 1925, applicable to the different types of vessels on the register. This information was courteously furnished by those to whom application was made.

3. **Total Value.**—For the purposes of local allocation, the vessels registered in the several States and in the Northern Territory have been treated as domiciled therein, and the estimated value in each case is as follows:—

ESTIMATED VALUE OF SHIPPING REGISTERED, 30th JUNE, 1925.

N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Aust.
£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.
3,978	3,156	416	995	302	376	7	9,230

The total for Australia represents an average of £1 11s. 2d. per head of the population at 30th June, 1925.

§ 10. Products of Local Industry.

1. **Agricultural and Pastoral.**—Whatever the point of time in respect of which an estimate of wealth is being prepared, there will, in any agricultural and pastoral community, always be a proportion of the previous season's production in the hands of the producers and dealers. In addition, there will usually at such a time be a greater or less amount of work performed, seed sown, etc., in respect of the succeeding harvest. In the case of Australia, there is also a large value attachable to the wool clip, which is being shorn as at the 30th June in any year. To allow for these several factors, it has been assumed that the value of agricultural and pastoral products in the hands of producers and dealers at 30th June, 1925, plus the value of work done, etc., for the ensuing season, may be taken at one-half the value of the agricultural production for the season 1924–25 plus 90 per cent. of the wool clip of the year 1925. The estimate which has

been made above in respect of sheep may be treated as value "off the shears." No allowance has been made for stocks of meat, butter, tallow, skins, hides, etc., held locally. The value obtained is as follows :—

ESTIMATED VALUE OF AGRICULTURAL AND PASTORAL PRODUCTS AS AT 30th JUNE, 1925.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aus.	Tas.	N. Ter.	F.C.T.	Aust.
	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.
Agricultural ..	18,011	13,862	6,996	7,659	5,605	1,403	2	10	53,548
Pastoral ..	34,327	10,716	13,085	5,054	3,910	1,324	2	..	68,418
Total ..	52,338	24,578	20,081	12,713	9,515	2,727	4	10	121,966

The total for Australia represents an average of £20 11s. 5d. per head of the population at 30th June, 1925.

2. **Local Manufactures.**—The value of the output of manufacturing establishments is collected and tabulated annually in the several States, and for the year 1924–25 totalled £380,843,986 for the whole of Australia. Of this, however, the railway and tramway workshops, docks, and shipbuilding yards, which are largely owned by various Governments are responsible for £14,027,262. This amount has consequently been deducted to reduce the total to a "private" basis in each State. For the purposes of the present estimate it has been assumed that one-sixth of the year's output would be in the hands of merchants and dealers at 30th June, 1925, and that the same proportion of the year's output would be in the hands of the manufacturers in the form of (*a*) completed articles, (*b*) partly manufactured goods, or (*c*) raw materials. The estimate for the holdings of all parties will thus be as follows :—

ESTIMATED VALUE OF LOCALLY MANUFACTURED PRODUCTS HELD AT 30th JUNE, 1925.

N.S.W.	Victoria.	Queensland.	S. Australia.	W. Australia.	Tasmania.	Australia.
£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000
50,793	38,269	16,031	10,249	4,364	2,566	122,272

The total for Australia represents an average of £20 12s. 5d. per head of the population at 30th June, 1925.

3. **Mining Products.**—Many of the products of mining in Australia are in the hands of manufacturers and banks, or are exported at a relatively early date after their extraction. This is particularly the case with gold. Probably the mineral most extensively held after extraction and before manufacture, consumption, export, etc., is coal. In the United States estimate it was assumed that at 31st December a quantity of coal equal to the whole of that mined during the year was in hand. Such an estimate would be far too high for Australia. For the purpose of the present estimate, it has been assumed that at 30th June, 1925, no gold was in the hands of the mining companies, and that the value of the other minerals so held was one-sixth of the total production of such minerals for the year 1925. Returns of the quantity and value of all minerals produced are collected and published annually by the Mines Departments of the several States.

The values ascertained in the manner indicated above are as follow:—

ESTIMATED VALUE OF MINERAL STOCKS (OTHER THAN GOLD), 30th JUNE, 1925.

N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Aust.
£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.
2,763	133	303	171	87	244	3	3,704

The total for Australia represents an average of 12s. 6d. per head of the population at 30th June, 1925.

§ 11. Merchandise and Personal Effects.

1. **Imported Merchandise.**—During the year ended 30th June, 1925, the total oversea importations of merchandise into Australia were valued at £157,143,296. For the purposes of the present estimate it has been assumed that at 30th June, 1925, the value of such merchandise in bonded warehouses, and in the hands of traders, was one-half of the total value, or in round numbers £78,572,000. Owing to the absence of interstate trade statistics, it is impossible accurately to allocate these importations to their States of ultimate destination. Figures are available showing the values of oversea merchandise directly delivered in each of the States, but as certain of the States, more particularly New South Wales and Victoria, import extensively for the purpose of subsequent distribution to other States, it is clear that an estimate based on direct importation oversea would misrepresent the ultimate distribution. The total of £78,572,000 mentioned above has consequently been allocated to the several States and Territories on a population basis, the results being as follows:—

ESTIMATED VALUE OF IMPORTED MERCHANDISE ON HAND, 30th JUNE, 1925.

N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	F.C.T.	Aust.
£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.
30,107	22,141	11,333	7,197	4,877	2,808	50	59	78,572

The Australian total represents an average of £13 5s. 0d. per head of the population at 30th June, 1925.

2. **Clothing and Personal Adornment.**—Under this head may be included all articles of wearing apparel, watches, jewellery, etc., in the hands of the public. Articles of this nature in bonded warehouses or in the hands of traders have been already accounted for under preceding heads. The item is one of some importance, but unfortunately there are no means readily available for making a reliable estimate of the value involved. It has consequently been assumed that an average of £5 per head of the population at 30th June, 1925, might be taken as a figure which at all events does not exaggerate the position. The result so obtained is as follows:—

ESTIMATED VALUE OF CLOTHING AND PERSONAL ADORNMENT, 30th JUNE, 1925.

N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	F.C.T.	Aust.
£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.
11,360	8,354	4,276	2,715	1,840	1,059	18	24	29,646

3. **Furniture, Fittings, etc.**—Under this head an estimate is given in respect of (i) household furniture and fittings, (ii) books, (iii) pictures and china, (iv) musical instruments, (v) sewing machines, (vi) kitchen utensils, (vii) fancy goods, etc., etc. As in the case of the preceding item, the materials available for an estimate are meagre. It is evident, however, that the wealth represented by the items coming under this head must be considerable.

The estimate was made in the following manner:—The Census of 4th April, 1921, furnished the number of occupied dwellings in each State and Territory, to which values per dwelling as shown in the following statement were applied after consideration of previous valuations and relative increases in values:—

OCCUPIED DWELLINGS AND VALUE OF CONTENTS.—CENSUS OF 1921.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	F.C.T.
Number of occupied dwellings ..	433,188	331,283	160,196	107,918	73,550	45,818	1,074	526
Estimated value of contents per occupied dwelling ..	£100	£100	£75	£100	£75	£75	£40	£75
Estimated value per head of census-population ..	£20.62	£21.63	£15.89	£21.80	£16.58	£16.07	£11.11	£15.34

As the number of dwellings in 1925 was not available, the amount per head shown above was multiplied into the population, giving the following results, viz.:—

ESTIMATED VALUE OF FURNITURE, ETC., AS AT 30th JUNE, 1925.

N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	F.C.T.	Aust.
£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.
46,847	36,141	13,589	11,840	6,102	3,405	42	68	118,034

The total for Australia represents an average of £19 18s. 2d. per head of the population at 30th June, 1925, or £93 3s. 3d. per occupied dwelling on the 1921 Census average of 4.68 inmates per occupied dwelling.

§ 12. Vehicles, Aircraft, and Wireless.

1. **Motor Vehicles.**—The registration of motor vehicles is compulsory in all the States, and establishes a record of the numbers of such vehicles in use, which, at 30th June, 1925, were as follows:—

NUMBER OF MOTOR VEHICLES REGISTERED, 30th JUNE, 1925.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Aust.
	No.	No.	No.	No.	No.	No.	No.	No.
Motor Cars ..	71,610	63,041	31,614	30,381	11,845	5,844	106	214,441
Commercial Vehicles	16,267	7,150	2,000	4,665	2,180	829	25	33,116
Motor Cycles ..	20,062	19,212	4,805	7,872	3,447	2,650	31	58,079
Total ..	107,939	89,403	38,419	42,918	17,472	9,323	162	305,636

Some of these vehicles belong to the Federal and State Governments, but their number is so small relatively that the valuation is not appreciably affected thereby. The average values have been taken at £275 for cars, £60 for cycles, and £200 for commercial vehicles. The application of these values to the numbers shown above produce estimated total values as follows :—

ESTIMATED VALUE OF MOTOR VEHICLES, 30th JUNE, 1925.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Aust.
	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.
Motor Cars ..	19,693	17,336	8,694	8,355	3,257	1,607	29	58,971
Commercial Vehicles	3,253	1,430	400	933	436	166	5	6,623
Motor Cycles ..	1,204	1,153	288	472	207	159	2	3,485
Total ..	24,150	19,919	9,382	9,760	3,900	1,932	36	69,079

The total for Australia represents an average of £11 13s. 0d. per head of the population at 30th June, 1925.

2. **Other Vehicles.**—With the increasing use of motor vehicles there is a decline in the number of horse-drawn vehicles in use. Data concerning the number and value of these are not available, and fairly large numbers have already been included in various parts of the foregoing estimate under such heads as "Machinery and Plant" and "Implements and Machinery." It is probable that as an offset to the number not so taken into account, the record given in sub-para. 1 above contains particulars of some motor vehicles already included elsewhere under more general heads. In these circumstances it has been considered desirable to exclude from the valuation any estimate for horse-drawn vehicles.

Ordinary row-boats, sail-boats, yachts, and small motor-propelled boats constitute another item in respect of which details as to number and value are not available.

3. **Aircraft.**—The number of aircraft registered in the various States and their estimated value as stated in the main by the registered owners, and, in such minor instances where the information was not furnished, by estimate, are as follows :—

AIRCRAFT.—PARTICULARS FOR YEAR ENDED 30th JUNE, 1925.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Aeroplanes—							
No.	5	21	14	2	12	..	54
Value	£4,500	£26,750	£11,150	£1,350	£15,000	..	£58,750

4. **Wireless Stations, Apparatus, etc.**—Particulars of the number and value of wireless stations in Australia for which licences were in force in 1924–25 are given in the following tables. The word "station" is here used in its technical sense in which it includes broadcast listening sets as well as the more elaborate "stations." The values have been supplied by the Chief Inspector of Wireless, Postmaster-General's Department.

WIRELESS STATIONS, ETC.—AUSTRALIA, 1924-25.

Class of Station.	No. of Stations.	Estimated Value.	
		Per Station.	Aggregate.
		£	£
Coast	17	5,000	85,000
Ship	121	800	96,800
Land	2	600	1,200
Broadcasting—			
Class A	7	7,000	49,000
Class B	13	600	7,800
Broadcast listeners'	63,403	15	951,045
Experimental—			
Transmitting	211	75	15,825
Receiving	504	25	12,600
Total	64,278	..	1,219,270

The aggregate values of the stations located in each of the States and in the Northern Territory were as follows :—

WIRELESS STATIONS, ETC.—VALUE, STATES, 1924-25.

Class of Station.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Aust.
	£	£	£	£	£	£	£	£
Coast	5,000	5,000	25,000	5,000	25,000	15,000	5,000	85,000
Ship	26,400	46,400	8,000	12,800	2,400	800	..	96,800
Land	..	..	..	..	..	600	600	1,200
Broadcasting—								
Class A ..	14,000	14,000	7,000	7,000	7,000	..	..	49,000
Class B ..	3,000	1,800	2,400	600	..	..	..	7,800
Broadcast listeners'	518,970	302,505	18,180	49,785	53,220	8,355	30	951,045
Experimental—								
Transmitting ..	5,850	4,350	1,875	1,800	1,050	900	..	15,825
Receiving ..	5,900	3,900	1,000	800	725	275	..	12,600
Total ..	579,120	377,955	63,455	77,785	89,395	25,930	5,630	1,219,270

§ 13. Summary of Private Wealth, 1925.

1. **Results.**—On combining the detailed estimates given in the preceding section, the total value of private wealth existing in Australia, exclusive of private interests in national and communal property, is found to be approximately 2,832 millions sterling, or £478 per head of the population of Australia at 30th June, 1925. As pointed out in sub-para. 2 immediately following, a comparison of this estimate with one based on a wealth Census or on private returns is not satisfactory unless there be added to the inventory estimate an allowance for the local holdings of Commonwealth, State, and Municipal securities, all of which are brought to account in the Census and probate methods. At the 30th June, 1925, the total amount so held was approximately 550 millions sterling, making with the sum quoted above a total of 3,382 millions.

A summary of the values obtained is furnished in the following table:—

ESTIMATE OF THE PRIVATE WEALTH OF AUSTRALIA AS AT 30th JUNE, 1925, BASED ON THE INVENTORY METHOD OF ESTIMATION.

Class of Property.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	F.C.T.	Aust.
	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.
(i) Land and Improvements	802,296	539,711	154,043	156,382	81,455	49,301	640	845	1,784,673
(ii) Live Stock	91,790	41,942	51,320	16,875	26,113	5,244	3,971	288	237,543
(iii) Agricultural, Dairying and Pastoral Implements and Machinery	14,740	11,830	6,386	6,676	4,677	804	16	14	45,143
(iv) Manufacturing Plant and Machinery	39,893	31,695	13,758	7,216	4,500	6,637	..	..	103,699
(v) Mining Properties (including Plant and Machinery)	24,619	1,673	4,339	1,651	4,145	2,328	46	..	38,801
(vi) Coin and Bullion ..	15,956	36,210	2,412	1,807	1,942	627	5	1	58,960
(vii) Private Railways and Tramways	3,744	565	3,439	263	4,827	1,466	..	..	14,302
(viii) Shipping	3,978	3,156	416	995	302	376	7	..	9,230
(ix) Agricultural and Pastoral Products	52,338	24,578	20,081	12,713	9,515	2,727	4	10	121,966
(x) Locally Manufactured Products	50,793	38,269	16,031	10,249	4,364	2,566	..	..	122,272
(xi) Mining Products (other than gold)	2,763	133	303	171	87	244	3	..	3,704
(xii) Imported Merchandise ..	30,107	22,141	11,333	7,197	4,877	2,808	50	59	78,572
(xiii) Clothing and Personal Adornments	11,360	8,354	4,276	2,715	1,840	1,059	18	24	29,646
(xiv) Furniture and Fittings, Books, etc.	46,847	36,141	13,589	11,840	6,102	3,405	42	68	118,034
(xv) Motor Vehicles ..	24,150	19,919	9,382	9,760	3,900	1,932	36	..	69,079
(xvi) Aircraft	5	27	11	1	15	..	..	..	59
(xvii) Wireless Stations ..	579	378	63	78	89	26	6	..	1,219
Total	1,215,958	816,722	311,182	246,589	158,748	81,550	4,844	1,309	2,836,902
Population at 30th June, 1925 (in thousands) ..	2,271.9	1,670.9	855.2	543.1	368.0	211.9	3.8	4.5	5,929.3
Private Wealth per head ..	£535	£489	£364	£454	£431	£385	£1,286	£294	£478

2. **Significance of Results.**—For the sake of avoiding any possible misunderstanding of the significance of the above figures, it may be well to state again here that they represent an estimate of the value of all the private material wealth existing in Australia at 30th June, 1925, whether such wealth was owned by Australian residents or not. Property situated outside Australia, but owned by Australian residents, is not included, and immaterial wealth such as title deeds, mortgage deeds, debentures, etc., is not, as such, included at all, the estimate being based entirely on the material private wealth itself, not in any way upon the individual titles thereto. Communal wealth in the sense of the property of Commonwealth and State Governments, and of the various local governing bodies, is not included, nor has any allowance been made for the fact that private investors are to a very large extent monetarily interested in such property in consequence of advances made by them by way of public and municipal loans.

§ 14. Earlier Inventory Estimates of Private Wealth in Australia.

1. **Estimates for 1890 and Earlier Years.**—The earliest estimate of this nature made in respect of Australia appears to be that made in 1892 by Mr. (later Sir) T. A. Coghlan, who, at the time, was Government Statistician of the State of New South Wales. Particulars of this estimate were embodied in a paper read before the Australasian Association for the Advancement of Science at its Hobart session in 1892, and were subsequently published in the 1892 issue of Coghlan's "Seven Colonies of Australasia." The estimate relates not only to Australia, but includes figures for New Zealand, and furnishes, in addition, aggregates but not details in respect of Australasia for 1813, 1838, and 1863. As the settlement of New Zealand in a permanent manner dates from 1840, the figures for 1813 and 1838 are necessarily purely Australian, while for 1890 the estimate for New

Zealand is shown in detail. In the case of 1863, however, the only figures furnished are those relating to "Australasia." For the purpose of comparing the Australian figures for the several years mentioned, it has been assumed here that in the estimate for 1863 the private wealth per head of population was the same in New Zealand as in Australia. With this adjustment, Coghlan's estimates of private wealth in Australia for the years in question may be stated as follows, the average amount per head of mean population being also shown :—

COGHLAN'S ESTIMATE OF AUSTRALIAN PRIVATE WEALTH, 1813 TO 1890.

Year.	1813.	1838.	1863.	1890.
Aggregate amount ..	£1,000,000	£26,000,000	£160,000,000*a*	£1,019,242,000
Mean Population ..	13,293	143,178	1,233,106	3,106,917
Average per head of Mean Population	£75	£182	£130	£328

(*a*) Adjusted. See letterpress above.

In later issues of "The Seven Colonies of Australasia" the figures for 1890 have been omitted, and an estimate for 1888 has been substituted, presumably with the object of making equal intervals of 25 years between the successive estimates. The figures, however, are given for "Australasia," not for Australia and New Zealand separately. The total shown is £1,015,000,000, or £154,434,000 less than the "Australasian" total for 1890. Assuming this rate of reduction to have applied equally to Australia and New Zealand, the figure for Australia for 1888 would work out at about £885,000,000, or £302 per head of mean population.

The following table shows the estimate for 1890 under eight classes of private wealth for Australia as a whole, particulars having been added showing the relative size of each class, and the amount per head of mean population :—

COGHLAN'S ESTIMATE OF PRIVATE WEALTH IN AUSTRALIA IN 1890.

Classification of Wealth.	Aggregate Amount.	Percentage on Total.	Average Amount Per Head of Mean Population.		
	£	%	£	*s.*	*d.*
Land, Houses and Permanent Improvements ..	721,303,000	70.77	232	3	2
Live Stock	102,952,000	10.10	33	2	9
Coin and Bullion	28,809,000	2.82	9	5	5
Merchandise	44,722,000	4.39	14	7	11
Household Furniture and Personal Property ..	52,863,000	5.19	17	0	3
Shipping	5,210,000	.51	1	13	7
Mines and Mining Plant	33,823,000	3.32	10	17	9
Plant employed in Agricultural, Manufacturing and other Industries not elsewhere included ..	29,560,000	2.90	9	10	3
Total	1,019,242,000	100.00	328	1	1

2. Estimates for 1903 and Earlier Years.—Further estimates of the private wealth of Australasia were prepared by Coghlan in respect of the years 1899, 1901, and 1903, and published in his "Seven Colonies of Australasia," and his "Statistical Account of Australia and New Zealand." The particulars in respect of the method of estimating are less complete than is the case with the estimate for 1890, but evidently they were made upon principles very similar in character. For the purposes of the present review it will be sufficient to consider in detail the latest of these, viz., that for 1903. The classes of wealth adopted differ slightly from those used in the 1890 estimate, the main alteration being the separation of "Land" from "Houses and Permanent Improvements," and the separation of "Personal Effects" from "Furniture and Household Goods and

Effects," thus increasing the number of classes to ten in place of the eight classes used in the estimate for 1890. The other classes were in some instances slightly altered in title, but were apparently little changed otherwise. The aggregate obtained for Australia is that shown in the succeeding table, columns having been added to show relative distribution and values per head.

COGHLAN'S ESTIMATE OF PRIVATE WEALTH IN AUSTRALIA FOR 1903.

Classification of Wealth.	Aggregate Amount.	Percentage on Total.	Average Amount Per Head of Mean Population.		
	£	%	£	s.	d.
Land	373,679,000	38.04	95	19	7
Houses and Permanent Improvements ..	310,265,000	31.60	79	13	10
Live Stock	96,915,000	9.86	24	17	10
Furniture and Household Goods and Effects ..	30,899,000	3.15	7	18	9
Personal Effects	12,464,000	1.27	3	4	0
Machinery and Implements of Trade (excluding Mining Machinery)	33,495,000	3.45	8	12	1
Shipping	6,359,000	.65	1	12	8
Mining Properties and Plant	32,199,000	3.27	8	5	5
Merchandise and Produce on Hand	59,640,000	6.06	15	6	4
Coin and Bullion	26,064,000	2.65	6	13	11
Total	981,979,000	100.00	252	4	5

§ 15. Comparison of Earlier Estimates with those for more Recent Dates.

1. *Aggregate Amounts.*—For the purpose of comparing the estimates made in respect of the years 1903, 1915, 1921, 1923, and 1925, the following table, based on the classification adopted in 1890, has been prepared :—

COMPARISON OF ESTIMATES FOR 1903, 1915, 1921, 1923, AND 1925.

Classification of Wealth.	Aggregate Amount of Private Wealth.				
	1903. (Coghlan).	1915. (Knibbs).	1921. (Wickens).	1923. (Wickens).	1925. (Wickens).
	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.
Land, Houses and Permanent Improvements ..	683,944	1,105,637	1,361,269	1,558,747	1,784,673
Live Stock	96,915	100,391	158,833	194,497	237,543
Coin and Bullion ..	26,064	44,379	61,216	46,058	58,960
Merchandise and Produce on Hand	59,640	147,948	259,901	260,070	326,514
Household Furniture and Personal Property ..	43,363	91,938	163,744	182,024	216,818
Shipping	6,359	13,331	7,243	8,992	9,230
Mines and Mining Plant ..	32,199	41,319	34,000	36,698	38,801
Plant, Machinery, etc., not elsewhere included ..	33,495	74,574	119,655	135,956	164,363
Total	981,979	1,619,517	2,165,861	2,423,042	2,836,902

The estimate for 1915 showed in every item a substantial advance on that for 1903. The largest increase was that of £421,693,000 in the value of "Land, Houses and Permanent Improvements," while for all classes of wealth an advance of £637,538,000 was shown.

In the estimate of 1903, values were adversely affected by the collapse in land values in the early nineties, followed and accentuated by the banking crisis of 1893. A series of unfavourable seasons which followed added to the general depression, a condition which was only slightly relieved by the discovery and development of the Western Australian goldfields in 1893–1897. A further unfavourable influence was the drought of 1902–3, which proved to be one of the most severe experienced in Australia.

With two exceptions, viz., (*a*) Shipping, and (*b*) Mines and Mining Plant, the estimate for 1921 showed a marked increase over that for 1915, the total increase for the six years being upwards of £546,000,000, of which £256,000,000 was accounted for in the item "Land and Improvements."

The estimate for 1923 exceeded that for 1921 by £260,000,000, of which "Land and Improvements" accounted for £197,000,000. With the exception of "Coin and Bullion," each item for 1923 exceeded the corresponding item for 1921, "Merchandise and Produce on Hand," however, being almost identical in the two years.

In the case of 1915 it should be noted that since 1896 there has been a fairly continuous upward trend in the world's prices for practically all commodities, accompanied in Australia by a marked recovery in the values of real estate. This rise in the prices of commodities was very marked from 1905 onwards, and was accentuated by the outbreak of war in 1914.

The marked increase in many items for the year 1921 over the corresponding items for 1915 was to some extent due to the change in price levels which occurred between those dates, but in the absence of satisfactory index-numbers concerning real estate and some other items it is impossible to make an appropriate allowance for this factor.

As indicated above, more than 75 per cent. of the increase recorded for 1923 over 1921 was due to increase in values of real estate, the only other extensive increase being that of £36,000,000 in the case of live stock.

Between 1923 and 1925 the total increase amounted to £413,860,000, towards which "Land, Houses and Permanent Improvements" contributed £225,926,000," "Merchandise and Produce on Hand" £66,444,000, and "Live Stock" £43,046,000. The largest proportionate increases were in the classes "Merchandise and Produce on Hand" 25.55 per cent., and "Live Stock" 22.13 per cent. During the two years the prices for Australian products showed a slight increase.

2. **Distribution of Private Wealth according to Class.**—The following table furnishes a comparison of the relative distribution of wealth according to class for the estimates dealt with above :—

RELATIVE DISTRIBUTION OF PRIVATE WEALTH.

Classification of Wealth.	Percentage on Estimated Total.				
	1903. (Coghlan).	1915. (Knibbs).	1921. (Wickens).	1923. (Wickens).	1925. (Wickens).
	%	%	%	%	%
Land, Houses, and Permanent Improvements ..	69.64	68.27	62.85	64.33	62.91
Live Stock	9.86	6.20	7.33	8.03	8.37
Coin and Bullion ..	2.65	2.74	2.83	1.90	2.08
Merchandise and Produce on Hand	6.06	9.14	12.00	10.73	11.51
Household Furniture and Personal Property ..	4.42	5.68	7.56	7.51	7.64
Shipping	0.65	0.82	0.33	0.37	0.33
Mines and Mining Plant ..	3.27	2.55	1.57	1.52	1.37
Plant, Machinery, etc., not elsewhere included ..	3.45	4.60	5.53	5.61	5.79
Total	100.00	100.00	100.00	100.00	100.00

An interesting feature of this comparison is the very high proportion in each case which is represented by property in the form of "Land, Houses and Permanent Improvements," ranging from 69.64 per cent. in the 1903 estimate to 62.85 per cent. in that for 1921.

The decline in this item between 1903 and 1925, and especially between 1915 and 1921, suggests that the rise in price levels so much in evidence from 1896 onwards had been less marked in the case of real estate than with other items, while the movement forward between 1921 and 1923 suggests that in this later period the price-level for real estate had not suffered the set-back experienced by commodities. This is borne out by evidence from other quarters.

An interesting feature of this table is the fact that the variations in the proportions represented by "Land, Houses and Permanent Improvements" are largely counterbalanced by variations in the opposite direction in "Merchandise and Produce on Hand," and that, in consequence, the proportion for these two classes combined is a fairly constant quantity. Thus for 1903 it was 75.70 per cent; for 1915, 77.41 per cent.; for 1921, 74.85 per cent.; for 1923, 75.06 per cent.; and for 1925, 74.42 per cent.

In general the changes in the proportions represented by the several classes other than the two mentioned are not striking, those most outstanding being the continuously downward movement in the proportion represented by "Mines and Mining Plant" and the continuously upward movement in "Plant, Machinery, etc."

3. **Private Wealth per Head in each Class.**—Another comparison of importance in this matter is the amount per head of mean population for the years in question, represented by the several items. This is furnished in the succeeding table:—

PRIVATE WEALTH PER HEAD OF POPULATION, 1903, 1915, 1921, 1923, AND 1925.

Classification of Wealth.	Average Wealth per Head.														
	1903. (Coghlan.)			1915. (Knibbs.)			1921. (Wickens.)			1923. (Wickens.)			1925. (Wickens.)		
	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
Land, Houses and Permanent Improvements ..	175	13	5	223	7	0	249	8	5	274	0	9	300	17	11
Live Stock	24	17	10	20	5	7	29	2	1	34	3	10	40	1	0
Coin and Bullion ..	6	13	11	8	19	4	11	4	4	8	1	11	9	18	10
Merchandise and Produce on Hand	15	6	4	29	17	9	47	12	5	45	14	5	55	1	0
Household Furniture and Personal Property ..	11	2	9	18	11	6	30	0	0	32	0	0	36	11	1
Shipping	1	12	8	2	13	10	1	6	6	1	11	8	1	11	1
Mines and Mining Plant ..	8	5	5	8	7	0	6	4	7	6	9	1	6	10	10
Plant, Machinery, etc.. not elsewhere included ..	8	12	1	15	1	3	21	18	6	23	18	0	27	14	3
Total	252	4	5	327	3	3	396	16	10	425	19	8	478	6	0

In the 1915 estimate the average per head is greater than that for 1903 in all the classes except live stock, the total per head giving an advance of £74 18s. 10d.

A comparison of the results per head for 1921 with those for 1915 indicates a total increase of £69 13s. 7d. per head for the six years. To this all classes contributed except "Shipping," which showed a decline of £1 7s. 4d. per head, and "Mining," which declined to the extent of £2 2s. 5d. per head. "Land and Improvements" increased by £26 1s. 5d. per head.

The increase per head for 1923 over the record for 1921 was £29 2s. 10d. for the two years. There were increases in all classes except "Coin and Bullion," which showed a decline of £3 2s. 5d. per head, and "Merchandise, etc.", where the falling off amounted to £1 18s. per head. "Land and Improvements" increased by £24 12s. 4d. per head.

Between 1923 and 1925 all classes increased in value per head of population except "Shipping," which recorded the relatively small decline of 7d. The principal increases per head were in "Land, Houses and Permanent Improvements,' £26 17s. 2d., and in "Merchandise and Produce on Hand," £9 6s. 7d. The total increase per head over the two years was £52 6s. 4d.

CHAPTER IX.

EDUCATION.

§ 1. Evolution of Educational Systems in Australia.

1. Educational Systems of the States.—(i) *Place of New South Wales in Australian Education.* The first settlement in Australia being in New South Wales, it is but natural that Australian education should have had its beginning in that State. In the evolution of educational method and system in Australia, New South Wales also has played a leading part, and has had practically a dominating influence. The subject is dealt with in some detail in No. I. and No. II. issues of the Commonwealth Official Year Book, but it is not proposed to repeat it in the present volume. (See also 2 hereunder.)

(ii) *Educational Systems of other Commonwealth States.* A more or less detailed account of the origin and development of the educational systems of the other States also appears in No. I. and No. II. issues of the Year Book. Later details are given hereunder.

(iii) *Medical Inspection of State School Children.* See Chapter XII., Public Hygiene.

2. Recent Development in State Educational Systems.—(i) *New South Wales.* In previous issues of the Year Book a brief account was given of the development of the New South Wales educational system since the year 1911. (See Year Book No. 17, p. 447.) Reference was made to the linking-up of the State School system with the University following on the passing of the University Amendment Act and Bursary Endowment Act of 1912; to the influence on attendance of the provisions of the amending Public Instruction Act of 1916; to the increased attention devoted in later years to school hygiene and to medical and dental inspection, and to the methods adopted of dealing with the problem of the backward or deficient child. Attention was also directed to the spread of agricultural teaching by the establishment of special agricultural schools, together with the special "rural schools" in country centres. (See also § 2, 4 (vi) hereinafter.) In recent years increasing attention has been given to vocational guidance training, and the Director of Education during a tour abroad in 1926 made special investigation into the matter. Under the charge of a superintendent, a vocational guidance bureau has been established, but so far has dealt with pupils seeking placement in the metropolitan area only. Future development will depend in large measure on the report of the Director. The bureau will be assisted in its work by advisory committees representative of various trades and occupations, and already quite a number of youths has found suitable placement through its agency. Reference to the types of pre-vocational schools in operation will be found in § 2, 4 (v *a*).

The Reports for the last few years draw attention to the disabilities under which the Education Department labours owing to shortage of teachers and lack of necessary funds for new buildings, equipment, and renovations. During the year 1925 the difficulty in regard to sufficiency of teachers was to some extent mitigated by the greater facilities available for the training of applicants, while the field of selection was widened by the receipt of applications for employment from teachers outside the State. Expenditure on buildings for the year 1926 amounted to £638,000, as compared with £209,000 in 1917, but outlay on a far greater scale is required to provide adequately for existing and prospective demands. At the end of 1926 over 17,000 pupils were accommodated in portable class rooms, nearly 10,000 were housed in buildings not intended for school rooms, and about 5,000 were taught in leased premises.

Excellent work is being done by the Parents' and Citizens' Associations which have replaced the old School Boards.

(ii) *Victoria.* Some account of the development of educational activity in Victoria up to the close of the year 1922 was given in Year Book No. 17, p. 448. The principal task confronting the educational authorities during the last few years has been to overtake arrears in the way of providing sufficient new schools and remodelling existing unsatisfactory buildings, and this work has been energetically pursued since 1920. In 1924 increased attention was given by teachers and inspectors to the use of intelligence tests as a means to secure more effective classification of pupils. A group test was worked out by the Training College and, in conjunction with examination tests, is proving of great value to teachers. Experiments in this direction are being steadily continued. During the last few years several of the higher grade teachers from Victorian schools have taught in England and in Canada under the exchange system, and others were granted leave for travel and study chiefly in England and France. Considerable benefit has accrued, especially in the case of teachers of modern languages, of history and of geography. In some cases the teachers who have come to Victoria under the system have elected to remain in Australia at the end of their term of service. The "Teachers Act of 1925," in addition to making more effective provision for the staffing of schools, considerably increases the chances of promotion of all teachers, and, coupled with the "Superannuation Act of 1925" has had a stimulating influence on the service generally. Excellent work is being done by the various local committees, parents' guilds, fathers' guilds, and mothers' clubs formed in connexion with the schools, and it is estimated that more than 20,000 people are interesting themselves in this direction. A notable feature of recent years has been the success attending the establishment of the ten Schools of Domestic Art, and the demand for places greatly exceeds the available accommodation. Specially trained teachers of housewifery from these institutions have been attached to the "Better Farming" trains organized by the Department of Agriculture.

(iii) *Queensland.* A brief account was given in Year Book No. 17, p. 448, of the changes introduced into the educational system of Queensland by the Act of 1910. Reference was also made to the establishment of High Schools in 1912, of a Teachers' Training College in 1914, of rural schools in 1917, and other matters. Tuition by correspondence was initiated in 1922. In 1923 classes were formed at various centres for giving special instruction to backward, sub-normal, and defective children, and operations in connexion therewith were extended in later years. A Travelling Domestic Science School was initiated at Cunnamulla towards the end of the year 1925, a specially designed and equipped railway car having been constructed for this object. Apart from the rural schools and technical classes, special vocational classes were opened in several centres in 1923. Towards the close of this year the Gatton Agricultural College came under the control of the Education Department, and is now working as an Agricultural College and High School. In 1925 an additional Travelling Domestic Science School for girls was provided, and a Travelling Manual Training School for boys was established. Additional dental treatment was arranged for by means of a Travelling Dental Clinic. Twelve specially trained teachers have been appointed to take over the work of organization of physical exercises and sport.

(iv) *South Australia.* In Year Book No. 17, p. 449, attention was drawn to the modifications introduced into the educational system in 1921, in the way of a new course of instruction in the primary schools; the adoption of new methods of training, examination, and classification of teachers; and the revision of the system of inspection. During the year 1925 three types of Central School came into operation—Commercial Schools for Boys, Junior Technical Schools for Boys, and Home-making Schools for Girls. The object of these institutions is to provide education and training with a vocational bias for pupils from 13 to 16 years of age who intend to enter on commercial, industrial, or home-making pursuits. Several new schools were built during the year, and the work of remodelling the older schoolrooms to bring them into conformity with modern requirements was continued. The Medical Branch also was reorganized, its staff was increased, and a more comprehensive scheme of work was initiated. All children will now be medically examined at least twice during their primary school life.

The recent substitution of local School Committees, each of which functions for one school only in place of the Boards of Advice which looked after groups of schools, has been attended by very satisfactory results. Greater provision of helpful equipment for schools has ensued, libraries have been established or extended, and playgrounds improved, etc. Excellent work has also been done by the mothers' clubs established in connexion with the Infant Schools.

(v) *Western Australia.* A brief account was given in Official Year Book No. 17, pp. 449–50, of the changes and improvements introduced into the educational system of Western Australia during the years 1912 to 1921, but considerations of space preclude its repetition in the present issue. During recent years efforts are being made at a more systematic correlation of the work done in the various courses at the central schools with the practical needs in the life work of the scholars. To assist children in the outback districts the number of special rural schools, referred to later, is being increased as opportunity offers, while the system of teaching by correspondence has been greatly extended. Excellent work is being done by the Parents' and Citizens' Associations formed in connexion with the schools. The spread of secondary education has resulted in a satisfactory increase in efficiency of candidates for the teaching profession, while good results have attended the arrangements for an interchange of teachers with the London County Council authorities.

(vi) *Tasmania.* Allusion was made in Year Book No. 17 (page 450) to the development on modern lines in recent years of the primary branch of the educational system of Tasmania, the establishment of secondary schools and of special infant schools, the extension of correspondence teaching, the provision of schools of method as an adjunct to a more efficient system of training teachers, and the means adopted for dealing with the problem of retardation. Limits of space preclude the repetition of this information in the present issue. In common with other States some difficulty has been experienced in securing suitable living accommodation for teachers in charge of outback schools, but it is hoped that this will in part be met by the scheme of consolidation of schools. Conveyance to Central schools was inaugurated in 1924, and it is proposed to extend this system as opportunity allows. In connexion with the problem of retardation, a Girls' Welfare School was established in 1924 at New Town, and represents the first attempt to deal with children from 14 to 16 years of age. Provision for elementary instruction in agriculture at primary schools in certain centres was also made in 1924. During the last three years considerable attention has been given in a number of schools to the subject of speech-training. Recently the practice has been adopted of allowing inspectors to make periodical visits to the mainland States for the purpose of gaining additional experience.

(vii) *Northern Territory.* Although the number of children of school age in the Territory is small, nevertheless ample provision has been made by the Commonwealth Government for primary education. State schools are in operation at Darwin, Parap, Pine Creek, Alice Springs, and Emungalan. There is also a school for aboriginal and half-caste children at Kahlin Compound, Darwin. Children of scattered settlers are visited and instructed by an itinerant teacher, while twelve families are receiving tuition by correspondence. In 1924, an inspector from the Queensland Education Department re-organized the educational system on the lines of that existing in Queensland, and the schools are now working in accordance with the Queensland curriculum. An inspection is made annually by an officer from the Queensland Department, and scholarships awarded may be taken out at approved secondary schools in Queensland. Of the 279 children on the rolls at the end of June, 1926, 77 were Chinese, 14 were quadroons, and 70 half-castes.

(viii) *Present position of State Education in Australia.* Throughout Australia primary education is compulsory and free, while there exists in all States a more or less liberal provision of scholarships and bursaries to the Higher State Schools, to the Secondary Schools, and to the Universities. Provided that the requisite standard is reached, it is, of course, permissible for children to receive home tuition, or to attend so-called private schools. The orientation, lighting, and ventilation of school buildings are being modernized, and in many cases both pupils as well as teachers are striving to render the class rooms bright and attractive and to give them an air of beauty and refinement. In all of the States periodical medical and dental inspection of the children is in force. (A detailed statement of the work being done in this direction will be found in the chapter dealing with Public Hygiene.) Methods of training teachers are now better developed, and although the "pupil teacher" system with its effects has not been wholly eliminated, it appears to be gradually vanishing. (The methods adopted in the various States for the selection and training of teachers are described in some detail in § 2, 6, hereinafter.) There has been a wider employment of kindergarten and Montessori principles in the early stages, and the more or less purely abstract teaching of the older days has been largely replaced by concrete methods. Self-activity on the part of the pupils is being further cultivated by the partial adoption of the "Dalton" system or modifications thereof. Such subjects as nature study, manual training, music, drawing, business practice, and domestic economy have received a general impetus. Greater attention has been given to the scientific classification of pupils, and to the difficult problem of dealing with sub-normal or defective children. (In the Report of the Education Department of South Australia for the year 1923, the Medical Inspector asserts that a large proportion of juvenile delinquency is due to mental deficiency.) Staff meetings are now regularly held in connexion with most of the primary schools, and the lectures and discussions thereat have conduced in a marked degree to efficient working. In recent years sport has been more generally encouraged at the schools, and the pupils' interest and proficiency in the various games have been largely increased by the helpful participation of the teachers. Moreover, as will be seen from the above, and from § 2, 4, the State Education Departments are increasing their activities in the direction of secondary education. Lastly, the system of inspection has been considerably remodelled. Under the old system, the inspector was little more than an examining officer, but, under the present régime the primary duty of this officer consists in guiding and directing the teaching in accordance with approved methods. (See also § 6, Technical Education.) Excellent results have followed from the system of exchange of teachers with English teachers, not only as regards the sharing of professional ideas, but through the promotion of wider and sounder knowledge of the countries concerned.

(ix) *Co-ordination of Educational Activities.* As pointed out already, the educational system of New South Wales may now be considered as a more or less homogeneous entity, the various stages succeeding one another by logical gradation from kindergarten to university. In the other States development is proceeding on somewhat similar lines, activity in this respect being greatly helped by interstate conferences of directors of education and of inspectors and teachers. The sixth biennial conference of directors of education was held at Brisbane in May, 1926, and was attended by representatives of all the Australian States and of New Zealand.

§ 2. State Schools.

1. **General.**—The State Schools, or, as they are sometimes termed, the "public" schools, of Australia comprise all schools directly under State control, in contradistinction to the so-called "private" schools, the bulk of which, though privately managed, nevertheless cater for all classes of the community. Separate information regarding Technical Education is given in § 6, but the junior technical schools are included hereunder.

2. **Returns for Year 1926.**—(i) *General.* The following table shows the number of State Schools, together with the teachers employed and the enrolment and "average attendance" in each State during the year 1926 :—

STATE SCHOOLS.—RETURNS, 1926.

State or Territory.	Schools.(*a*)	Teachers.(*b*)	Scholars Enrolled.	Average Attendance.	Percentage of Attendance on Enrolment.
New South Wales (*c*) ..	3,401	11,092	324,203	275,543	85.0
Victoria	2,687	8,166	247,092	196,977	79.7
Queensland	1,739	4,104	140,023	108,526	77.5
South Australia	1,003	3,022	84,657	71,818	84.8
Western Australia ..	848	1,954	55,501	49,593	89.4
Tasmania	519	1,284	32,140	27,880	86.7
Northern Territory ..	6	11	309	234	75.7
Australia	10,203	29,633	883,925	730,571	82.7

(*a*) Schools open during year. (*b*) Exclusive of sewing mistresses. (*c*) Including Federal Capital Territory.

(ii) *Schools in the Federal Capital Area.* During the year 1926 thirteen State Schools were in operation in the Federal Capital Territory (Yass-Canberra). The pupils enrolled numbered 953 and the average attendance 649. Cost of upkeep amounted to £6,897. By arrangement with the Federal Government these schools are conducted by the New South Wales Education Department on the same lines as the ordinary State Schools, the Department being recouped for expenditure. Ample provision has been made for both primary and secondary education, and this will be increased to meet requirements. The question of the establishment of a University at Canberra is at present under consideration.

3. Growth of Enrolment and Attendance.—The enrolment and average attendance at the State Schools in Australia are given below for the years 1891, 1901, 1911, and for each year of the period 1922 to 1926 :—

STATE SCHOOLS.—ENROLMENT AND ATTENDANCE.—AUSTRALIA, 1891 TO 1926.

Year.	Total Population. (a)	Enrolment.	Average Attendance.	Year.	Total Population. (a)	Enrolment.	Average Attendance.
1891 ..	3,421	561,153	350,773	1923 ..	5,750	848,882	685,233
1901 ..	3,825	633,478	450,246	1924 ..	5,874	861,256	705,990
1911 ..	4,573	638,850	463,799	1925 ..	5,992	872,473	720,975
1922 ..	5,633	837,426	688,264	1926 ..	6,111	883,925	730,571

(a) At 31st December, in thousands.

During the last five years the average attendance increased by 6 per cent., the figures ranging from 9 and 7 in South Australia and New South Wales respectively to about 3 per cent. in Western Australia and Tasmania.

4. Distribution of Educational Facilities.—(i) *In Sparsely-settled Districts.* It has always been the aim of the State to carry the benefits of education into the remotest and most sparsely-settled districts. This is effected in various ways :—(*a*) By the establishment of Provisional Schools, i.e., small schools in which the attendance does not amount to more than about a dozen pupils, these institutions merging into the ordinary public school list when the attendance exceeds the minimum : (*b*) When there are not enough children to form a provisional school, what are known as Half-time Schools are formed, the teacher visiting them on alternate days : (*c*) In still more sparsely-peopled districts, an itinerant teacher goes from house to house within a certain radius. Thus, in Queensland during 1926 the 10 itinerant teachers' districts covered 341,000 square miles of country, while a distance of 57,056 miles was travelled in visiting 1,202 children. Further, in New South Wales, Victoria, South Australia, Western Australia and Tasmania parents in the thinly-peopled areas are allowed to club together and build a school, which receives aid from the Government in the form of a yearly subsidy and grant of school material. In some cases the Department also provides the building. During 1926, subsidy to the amount of £28,467 was paid to 628 schools in New South Wales. Victoria had 1 school of this type, Western Australia 16, and Tasmania 48 : (*d*) Several "travelling" schools have been established in New South Wales, the teacher being supplied with a van carrying a tent for himself and one for use as a school, together with books and apparatus for primary teaching. South Australia has devised attractive portable schools to meet the needs of new districts and temporary settlements. Queensland has three travelling housecraft schools for the instruction of girls, as well as adults, in the smaller centres, and in 1925 established a travelling manual training school for boys. Railway Camp Schools are established in some States on the sites of extensive railway works : (*e*) All the States provide also for education, by correspondence, of children in localities not at present reached by the methods outlined above, or for the purpose of supplementing the instruction given by the itinerant teachers. At the end of 1926 over 3,000 children were on the roll of the

Correspondence School in New South Wales, and 66 teachers were occupied solely in this branch of teaching. Many children attending small one-teacher schools receive super-primary instruction by correspondence, thereby obviating the necessity of having to travel to central schools. In Victoria, about 1,500 invalid and isolated children were receiving instruction by this means, the number taking secondary work being over 1,000. As evidence of the success of the system, it is stated that in some cases where families have moved into a district where attendance at school is possible, the parents have asked for the correspondence lessons to be retained. In Queensland the net enrolment in the Correspondence Schools at the end of 1926 amounted to 3,047 In cases where parents can afford some assistance to the children it is considered that better results are obtained than by the itinerant teacher system. The benefits of the correspondence system have been extended to isolated children in Central Australia, in the Northern Territory, in the New Hebrides, and in New Guinea. In South Australia the Correspondence School at Adelaide had an enrolment in 1926 of 842. A library has been established in connexion with the school, and the books are much appreciated by both parents and children "outback." Early in 1925 the work of the school was extended to meet the needs of in-patients at the Children's Hospital, and 20 children were receiving lessons in 1926. The teachers are assisted in this work by University graduates and others, who give their services voluntarily. The enrolment in correspondence classes in Western Australia of isolated children during 1926 was about 1,300. In addition, 1,117 children at small schools, and 75 who had left school, were taking correspondence lessons in special subjects. A fourth group consists of isolated children desirous of passing the junior examination, and a fifth of probationers and unclassified teachers preparing for a certificate of whom 74 were receiving help. There are nine teachers attached to the Correspondence School in Hobart, and a visiting teacher tours the whole island, calling, as far as possible, at all the isolated dwellings. The number on the roll in 1926 was about 250. In the Northern Territory during 1926 an itinerant teacher visited and instructed 12 children living on scattered holdings chiefly in the vicinity of the railway line.

(ii) *Centralization of Schools.* The question of centralization of schools adopted so successfully in America and Canada has received some attention in Australia, and particularly in New South Wales. It is recognized that a single adequately staffed and well-equipped central institution can give more efficient teaching than a congeries of small scattered schools in the hands of less highly trained teachers, and the small schools in some districts were therefore closed and the children conveyed to the central institution. The principle was first adopted in New South Wales in 1904, and in 1926 a sum of £44,503 was expended in boarding allowance and conveyance to central schools. Cost of conveyance to State Schools in Victoria during 1926 was returned as £8,044. In South Australia approval was given for the establishment of consolidated schools in three localities in 1926 and the sum of £4,172 was disbursed in connexion with travelling expenses of school children, while £13,600 was spent in Western Australia, and about £2,500 in Tasmania. (It may be pointed out, however, that the parents are often reluctant to part with the small schools which form, as it were, "heart centres" in their little community, while the kindly help of the teachers is a great asset in the social and intellectual life of the districts served by the schools.)

(iii) *Education of Retarded and Defective Children.*—(*a*) *New South Wales.* A school for the deaf and dumb and the blind has been in operation for many years, and a scheme is under consideration for the provision of skilled teaching for the retarded and defective. A certain amount of scientific work in this connexion has been carried out at the Training College. In March, 1925, a contract was let for the erection at Glenfield of a special school for defectives, and the building was opened with practically a full complement of children of both sexes early in 1927. Two Committees, one composed of departmental officers, and the other of experts in mental problems will assist the Department in administering the scheme of training. The buildings have been planned to accommodate 128 resident pupils, but it is expected that the demand will be greatly in excess of this provision.

At the end of 1926 the pupils on the roll at the Institution for the Deaf, Dumb, and Blind numbered 162.

(*b*) *Victoria.* In this State there is a special school for the deaf and dumb, a school for the blind, a school for epileptics, two schools for the feeble-minded, and an open-air school for delicate children selected by the school medical officers from congested metropolitan areas. Backward children in the metropolitan area and in several provincial centres are drafted into tutorial classes, under specially-trained teachers, and it is proposed to establish a residential training home. About 40 of these tutorial or "opportunity" classes were in successful operation in Melbourne during the year 1926.

Schools are also held at the Pentridge Gaol and the Castlemaine Reformatory.

(*c*) *Queensland.* Schools for the special instruction of backward and sub-normal or defective children have been in operation since 1923. The classes are held in Brisbane and the chief provincial towns. As it was found that parents disliked the idea of sending their children to "backward schools," the name was recently changed to "opportunity schools." The classes are divided into two grades—A and B—the former taking merely backward pupils of both sexes, and the latter boys of a low type of mentality. In 1926, eight classes were in operation in Grade A, and two in Grade B, and these were attended by 342 pupils (including 122 girls) and 38 pupils respectively. Of the latter it was ascertained that in the majority of instances the low mentality was due to illness or physical defect, while in the former much of the backwardness was due to remediable causes, and it was proposed to return 93 pupils to their own schools in 1927. The history and progress of each child at these institutions are carefully recorded by means of a card system.

(*d*) *South Australia.* An expert psychologist has been appointed to examine and classify retarded and mentally defective children, train the special teachers required, and give instruction to students at the Training College. Opportunity classes were established in 1925, and up to the end of 1926 enrolments therein numbered 231, of whom 157 were on the roll at the end of the year. The results so far are regarded as satisfactory, but it is stated that there is need for legislation giving control over the feeble-minded throughout adolescence.

(*e*) *Western Australia.* In collaboration with the school medical officers, the teachers keep records of special or defective children and take steps to ensure attention and help in making improvement.

(*f*) *Tasmania.* Three classes, with five teachers, are attached to the ordinary State schools in Hobart and Launceston, and are designed to meet the needs of children from 9 to 14 years of age. In addition, there is a special school at Hobart for girls aged from 12 to 16 years. This institution is conducted on vocational lines, the instruction being principally domestic, and provision is made for helping the girls after they leave school. At the end of 1926 the total number of sub-normal children under tuition was 106.

(iv) *Evening Schools.* Evening Public Schools have been in existence for many years in some of the States, but their progress has been uncertain. In New South Wales the 54 Evening Continuation Schools had an effective enrolment of 4,368 and an average attendance of 3,256 in 1926. The schools for boys are classed as commercial, commercial preparatory, junior technical, and junior technical preparatory, and for girls as domestic and domestic preparatory. Attendances at the schools for boys numbered 2,692, and at those for girls 564. The comparatively high proportion of attendance to enrolment shows that the institutions are attractive. In Victoria there were 10 evening continuation classes in operation during 1926, the average attendance being 55. Although the Education Act of 1910 gives authority for the establishment of evening continuation classes at which the attendance of boys up to the age of seventeen years and living within a radius of 2 miles may be made compulsory for six hours a week, considerations of expense have prevented the free exercise of this power. Evening Continuation Schools have been established under regulation in South Australia, and are intended principally to help the working boy to improve his general education. In Western Australia evening continuation classes were held at 21 centres in 1926, with an average enrolment of 2,366 pupils.

(v) *Higher State Schools.* (*a*) *New South Wales.* In New South Wales, public schools which provided advanced courses of instruction for two years for pupils who have completed the primary course were classed as Superior Schools. These were reorganized in 1913 as Day Continuation Schools, and divided into Superior Commercial Schools, Superior Junior Technical Schools, and Superior Domestic Schools for Girls. During

1926 there were 105 schools of this type in operation, of which 18 were in the Commercial group, 30 in the Junior Technical, and 57 in the Domestic group, with an average attendance of 15,056 in the sixth and seventh classes. It is believed, however, that greater efficiency could be achieved by reducing the number of these schools and establishing Central "Superior Public Schools" instead. Provision has also been made for the more advanced education of children in country centres by the establishment of 14 District Schools. These schools, which in 1926 had an average attendance of 950, are specially staffed, and, in addition to the usual work, undertake the preparation of students for admission to the training colleges. In addition, there are 30 High Schools in the State. These had in 1926 an average attendance of 8,546. The growing demand for High School education in the metropolis and in country centres led to the establishment of Intermediate High Schools, and in 1926 the number had increased to 38, with an average attention of 7,030. The Department publishes each year a statement showing the occupations taken up by High School pupils at the end of their school career. For the year 1926, out of 2,722 boys who left school, 792 became clerks, 346 were shop assistants, 322 entered on pastoral or agricultural work, while of the balance, 261 became unskilled labourers. Although it does not follow that all those who joined the ranks of unskilled labour permanently remain there, nevertheless the proportion is regarded as too high.

The Sydney Grammar School (not a "State" School in the ordinary acceptation of the term), which receives a State endowment of £1,500 a year, had, in 1926, an enrolment of 601 pupils, and an average attendance of 570.

(*b*) *Victoria.* In Victoria, action was taken in January, 1912, to give effect to the provisions of the Education Act of 1910, with regard to the decentralization of the system of secondary education. Forty-eight Higher Elementary and 34 District High Schools have been established, and, to obviate congestion at the High Schools, Higher Elementary Classes are carried on at 31 "Central" Schools. The average attendance for 1926 at the Higher Elementary Schools was 3,658, of whom 1,759 were girls; at the District High Schools 7,537, of whom 3,783 were girls; while 1,886 boys and 1,887 girls were receiving secondary teaching in the Central Schools. The qualifications for admission to the High Schools and Higher Elementary Schools are that pupils shall be not less than 12 years of age, shall possess the qualifying certificate or its equivalent, and that their parents shall undertake that the children will remain at school for four years. For the first two years there is a common course for all pupils, followed thereafter by four special courses :—(1) A preparatory professional course for pupils preparing to proceed to the University, to enter the teaching profession, or to gain a sound general education ; (2) an agricultural course to be taken in Agricultural High Schools ; (3) a commercial course ; and (4) a domestic arts course for girls. Parallel with these courses an industrial course has been developed for pupils who intend to enter upon some form of industrial occupation.

The demand for places in the metropolitan High Schools is in excess of the available accommodation, and although the "Central" Schools, already referred to, have to some extent relieved the congestion, increased provision is urgently needed.

In the Junior Technical Schools pupils are enrolled at 12 to 13 years of age for a course extending over three years designed to qualify for entrance to the Senior Technical Schools. There were 27 of these junior schools in operation at the end of 1926 with a net enrolment of 6,010 pupils.

Ten Schools of Domestic Arts have been established, and have met with such success that the accommodation is already overtaxed. At these institutions, in addition to continuing their general education, the girls receive special instruction in cookery, needlework, and various home duties.

(*c*) *Queensland.* Prior to the year 1912, Queensland did not possess any distinctly secondary schools under State control, but in February of that year High Schools were opened at Warwick, Gympie, Bundaberg, Mount Morgan, Mackay, and Charters Towers. Tuition at these schools is free, but students must pass a qualifying entrance examination. Three courses of study—General, Commercial, and Domestic are provided. The General Course leads up to the University, and students are enabled to matriculate from the High Schools. In 1917 and 1920 High Schools were opened at Gatton and Roma respectively. "The Brisbane Junior High School" was opened in 1920, but from 1st July, 1921, was constituted a fully developed High School. The Cairns High School was opened in 1924. High Schools are also conducted as departments of the technical colleges at Toowoomba, Rockhampton, and Townsville. In smaller centres where an average of not less than 25 qualified pupils can be obtained, secondary tuition was provided at existing State Schools. Owing to diminished attendance only five of these secondary "tops" have been retained. The enrolment at High Schools in 1926 was 2,199, and the daily attendance 1,666. There are, moreover, ten Grammar Schools—six for boys and four for girls—each of which was subsidized by the State to the extent of £750 per annum, and in addition received a payment of £250 per annum for providing five scholarships for State scholars. Owing to representations regarding increased cost of maintenance, the grants were increased in 1920, and the total endowment paid to these schools in 1926 amounted to £19,200. The Government also pays *per capita* fees in payment for the tuition of State scholarship-holders in attendance at the Grammar Schools. During 1926 the payments for fees came to £12,753. The enrolment at the Grammar Schools in 1926 was 2,057 and the average attendance 1,625. Since the year 1909 these schools have been regularly examined by the inspectors of the Education Department. Pupils at all primary schools, State or private, in Queensland, who succeed in passing the prescribed examination are granted free tuition at any "approved" secondary school in the State, and in certain cases monetary and living allowances are granted. The Government also provides annually 20 scholarships to the University of Queensland. These scholarships, which carry a liberal living allowance during their tenure, are awarded on the results obtained by candidates at the Senior Public Examination.

(*d*) *South Australia.* Including the Adelaide High School, there were altogether 24 High Schools open in South Australia in 1926, with an enrolment of 3,820, an average attendance of 3,603, and a staff of 160 teachers. In addition to giving secondary education, these institutions form a valuable source from which the Department can draw a supply of young teachers.

In order to meet the needs of children who have gained the qualifying certificate but are unable to attend High Schools, 19 Higher Primary Schools are in operation. These had an enrolment in 1926 of 326. The 18 Central Schools provide an education with a vocational bias for pupils who will leave school at the ages of 13 to 16 years to enter upon industrial, commercial, or domestic pursuits, and in 1926 had an enrolment of 1,695.

(*e*) *Western Australia.* The enrolment at the seven High Schools in 1926 was 1,475 and the average attendance 1,412. In addition, the primary schools include a number of Central Schools in which the upper classes are collected from various contributory schools in the surrounding districts. These schools provide graduated professional, commercial, industrial, and domestic courses. Altogether 2,974 pupils were taking these courses, while 483 children in country towns were receiving instruction beyond the primary stage. Evening continuation classes were attended at 21 centres in 1926 by about 2,400 pupils. The classes are intended to provide some measure of higher education to those who leave school as soon as they reach the compulsory age of 14 years. A scheme of carefully compiled correspondence lessons with the object of giving some measure of secondary education to suitable scholars in scattered country areas has also been arranged.

(*f*) *Tasmania.* The enrolment and average attendance at the High Schools in 1926 were 1,114 and 1,060 respectively. These provide for five classes of pupils—(i) Those who desire to become teachers; (ii) University students; (iii) Commercial; (iv) Mechanics; and (v) Home duties (girls). The full secondary course covers five years. At present the accommodation available is overtaxed, and a number of children who have reached the required standard is unable to gain admission.

(*g*) *Northern Territory.* Owing to the dwindling attendance, the High School class was abandoned in 1925, and a scholarship tenable at an approved secondary school in Queensland was substituted.

(*h*) *Scholarships and Bursaries.* As pointed out in § 1. 2 viii. *ante*, an excellent scheme of scholarships and bursaries to the higher State schools, and where required, to private secondary schools and to the Universities is in force in each State.

(vi) *Agricultural Training in State Schools.* (*a*) *New South Wales.* During 1921 the whole subject of agricultural education was revised, and, under a Supervisor of Agriculture, a definite course of scientific and practical instruction was evolved. This course is now being taken at the residential schools at Glenfield and Yanco, and it is proposed to establish similar schools in other parts of the State. The necessary number of teachers to initiate the work has been provided, and students will be trained at the University to meet future requirements. The enrolment at Glenfield (Hurlstone Agricultural School) in 1926 numbered 159, and at the end of the year 113 students were in residence at Yanco. Rural Schools, giving a course in elementary agriculture, nature study, and farm mechanics for boys, and domestic science and horticulture for girls were established in 1923. In 1926 the rural course was in operation in 15 country schools. The course extends over three years, and includes such subjects as elementary agriculture, applied farm mechanics, and rural economics in the case of boys, while the girl pupils receive training in domestic science and horticulture. A model farm, varying in extent from 1 to 5 acres, is attached to each school. Average attendance at these schools in 1926 was 923.

(*b*) *Victoria.* In Victoria, Agricultural High Schools have been established in various country centres. Pupils must be at least fourteen years of age, and have passed beyond the curriculum of the elementary school, or else be able to afford satisfactory proof that they are qualified to profit by the instruction offered. The schools are practically secondary schools with an agricultural bias, and form a link between the rural school and the agricultural college. They are also used as a preliminary stage in the education of boys and girls who wish to become teachers and eventually graduate in the State Training College and the University. At some of the schools short courses in agriculture have been instituted for farmers' sons who have left school. A local council is appointed for each school, and exercises a general oversight over its operations. The experimental plots at these schools have aroused much interest among the farmers from the surrounding districts. A Supervisor of Agriculture reports and gives advice on the teaching of agriculture in the State Schools. A fair number of teachers has gained diplomas in agriculture, and is capable of giving practical instruction at the High Schools. Schools of Agriculture are conducted by the Agricultural Department at the State Research Farm, Werribee. Teachers in the wheat-growing districts are also instructed for short periods by the organizing Inspector of Agriculture at the University, and their services are utilized as leaders or group supervisors in their districts. The elementary principles of agriculture are taught in a large number of State Schools, and progress has been made in the direction of establishing agricultural clubs and home-project organizations. Experimental work at the Moriac School some years ago proved to the residents in the locality that onion-growing was a payable proposition. A Horticultural Society has been established, with a number of schools in affiliation, while practical help in school gardening is afforded by the departmental supervisor. The Society has a nursery and distributing centre for plants and seeds at Oakleigh, and sub-nurseries have been established at various schools. Children in remote districts receive tuition by correspondence, and 2,000 packets of seeds were forwarded to them in 1926. Recently an officer has been detailed to promote the establishment of school plantations on blocks adjacent to school properties, the subsequent care of the trees, etc., to be undertaken by the pupils. Since the year 1923 plantations have been established at 152 schools, the area reserved amounts to 1,750 acres, and the trees planted to the 30th June, 1927, numbered 150,000. Nurseries are in existence at 50 schools.

(*c*) *Queensland.* In Queensland the Government provides a small grant to encourage the study of agriculture, horticulture, and kindred subjects in the State Schools, while a departmental teacher of agriculture visits the schools and gives assistance in agricultural, horticultural, and nature study work. Excellent experimental work has been carried out at some of the schools, and gardens have been established wherever circumstances permitted. Cotton culture was undertaken by some hundreds of schools, in many cases, with marked success, the product being harvested and sold at a satisfactory price. Several of the schools, with their surroundings of well-grown shade and ornamental trees, make attractive spots in the country landscape. In some cases forestry work has been taken up by schools, and, with the aid of the Forestry Department, it is proposed where feasible to plant school reserves with commercial timbers. Short courses of instruction for teachers have been instituted at the Gatton College. This institution was placed under the control of the Education Department in September, 1923, and was re-organized so as to include an Agricultural High School, which, in addition to ordinary secondary education, will provide graded courses in agriculture. Provision has also been made for non-resident students, and vacation courses have been arranged for State School teachers. In January, 1926, the Summer School was attended by 30 teachers drawn from different parts of the State. A Tractor School for farmers held during the year had an enrolment of 88 students. In order to assist employees in butter and cheese factories to gain a basic knowledge of the sciences on which the success of their industries rests, a school of instruction was held in June, at which the limited accommodation available was fully taxed. A large number of teachers has gained a practical knowledge of milk and cream testing and dairy farming methods generally, and the subject is now added to the programme of instruction in several of the dairying districts. The practical advice and help given has resulted in many instances in marked improvement in the dairy herds. Rural Schools have been established at Boonah, Home Hill, Nambour, Clifton, Gordonvale, Murgon, Gayndah, Imbil, Beenleigh, and Stanthorpe. In addition to the ordinary subjects of the curriculum these schools provide for instruction in farming, fruit-growing, dairying, etc., with dressmaking, millinery and cookery for girls, and woodwork, leatherwork, and tinsmithing for boys. Many of the pupils are expert milk-testers, and others are first-class fruit packers. Training in business methods, shorthand and typewriting is also available. Supplies of trees for distribution to other schools are raised at Nambour, and many schools distribute trees and plants for home planting. "Home project" schemes whereby subjects of practical agricultural interest are studied out of school hours have been established in connexion with 50 schools.

(*d*) *South Australia.* In South Australia the Public Schools' Floral and Industrial Society, founded in 1880, holds annual exhibitions of school work from all parts of the State. In addition, it has for some years undertaken the distribution of flower seeds among school children at a very cheap rate, and has thus fostered the love of horticulture. A special instructor has been appointed to give assistance to teachers desirous of making their school gardens aid in nature study work. Assistance is given by personal visits as well as by correspondence, and by instruction at vacation Summer Schools. Teachers in training receive instruction in nature knowledge and the art of conducting nature studies. Elementary agriculture is taught in 131 schools, and 450 teachers have qualified as instructors in the subject. A seed wheat competition amongst school children inaugurated in 1911 has proved very successful. In 1919 two of the pupils who entered on the work of wheat-breeding produced wheat of such quality that they were unable to supply the orders for seed grain received from South Australia, as well as from other States. The competition has been regularly carried on since its inception. Milk-testing is carried out in several schools, and the various home projects schemes, and agricultural training generally are greatly helped by the practical co-operation of the farmers. The number of school agricultural clubs at the latest available date was 91. A Forest Camp School is held annually during the summer and autumn months in the Kuitpo forest, the scholars receiving practical training in forestry and allied subjects.

(*e*) *Western Australia.* In Western Australia an advisory teacher of nature study visits the schools and gives advice in regard to proper methods in horticulture and experimental agricultural work. The number and usefulness of the gardens and experimental plots attached to State Schools show marked improvement each year. Special attention is being paid to the needs of the country schools, and as far as possible the instruction is given a practical bias. In some districts definite projects are undertaken of importance to a rural community, i.e., vegetable growing, bee-keeping, and pig and poultry keeping. The boys are also trained in useful manual work, and the girls, wherever possible, are taught simple cookery, and the drying and preserving of fruit and vegetables. Forty special rural schools have been established in different parts of the State, and the project system has as far as possible been made portion of the curriculum. A considerable amount of help is afforded to these schools by the Correspondence staff. Early in 1914 a school was opened on the Narrogin State Farm. The pupils are taken directly from the primary schools, and the course of instruction lasts for two years. On its completion students are qualified to enter on the diploma course at the University. The school was brought under the control of the Education Department in 1921, and has so justified its existence that it cannot accommodate all the applicants for admission. During 1926 there was a full quota of 70 students. Provision has been made for practical work in agriculture at the High School at Northam, and, by arrangement, some of the pupils spend a portion of their time each year at the State Experimental Farm at Merredin. The Education Department is also interesting itself in finding employment on farms for town boys who have difficulty in obtaining employment at home.

(*f*) *Tasmania.* In Tasmania the organizing teacher of nature study visits and advises the teachers at the State Schools, and gives addresses and model lessons at the schools of instruction. During 1924 a beginning was made with the work of giving agricultural teaching at selected primary schools, and the results to date are regarded as distinctly encouraging. The subject of agriculture has been added to the list for the intermediate examination. Under an amendment to the Bursaries Act provision has been made for agricultural bursaries, and the Agricultural Department gives two bursaries annually to boys passing the intermediate examination who have completed a course in agriculture and botany. These bursaries are tenable at the Hawkesbury College in New South Wales. Considerable success has attended the establishment of classes in Hobart for instruction in apple-grading and packing, and similar classes have been formed at several other centres.

5. Teachers.—The distribution of the teaching staff in the State Schools during the year 1926, including teachers of needlework, was as follows :—

STATE SCHOOLS.—TEACHING STAFF, 1926.

State.	Principal Teachers.		Assistants.		Pupil or Junior Teachers.		Sewing Mistresses.	Total.		
	Males.	Fem.	Males.	Fem.	Males.	Fem.		Males.	Fem.	Total.
New South Wales	2,398	1,065	2,291	5,338	..	..	221	4,689	6,624	11,313
Victoria ..	1,699	1,124	1,031	2,558	351	1,403	405	3,081	5,490	8,571
Queensland ..	1,029	678	626	1,395	151	225	..	1,806	2,298	4,104
South Australia	555	566	249	832	317	503	174	1,121	2,075	3,196
Western Australia	426	381	265	727	23	132	127	714	1,367	2,081
Tasmania ..	210	325	74	385	61	229	2	345	941	1,286
Northern Territory	3	4	1	2	..	1	..	4	7	11
Total	6,320	4,143	4,537	11,237	903	2,493	929	11,760	18,802	30,562

The figures for principal teachers include mistresses of departments, while students in training colleges have been grouped with assistants. Some of the teachers in sole charge of small schools have had very little training, but future permanent appointments will be confined as far as possible to those who have gone through a regular course of instruction.

It will be observed that there is a fairly large number of junior teachers, or pupil teachers, as they are called in some of the States. Although expert pedagogical opinion throughout the world is against the pupil-teacher system, motives of practical expediency compel its retention, or some modification thereof, in most countries. Allusion to the methods of training will be found in the next sub-section.

In New South Wales and in some of the other States attention has recently been drawn to the difficulty of securing an adequate supply of teachers, particularly male teachers for small schools in out-back districts. Difficulty is also experienced in some of the States in securing suitable living accommodation for teachers of these small schools.

6. **Training Colleges.**—The development of the training systems of the various States has been alluded to at some length in earlier issues of the Year Book. The present position is as follows :—

(i) *New South Wales.* At the end of 1926 the total number of students in training was 1,256 (433 men and 823 women), of whom 238 were taking the twelve months' course for rural teachers or assistants, and the balance the various courses up to five years, and the special courses arranged in accordance with departmental requirements. Practically all accessible metropolitan schools are used as practice schools for giving training-college students opportunity to acquire practical skill in teaching. Formerly the limits of accommodation at the College were responsible for the employment in the schools of a number of untrained juniors, but during recent years teachers entering the service have at least six months' professional training. The Principal of the College is also Professor of Education at the University. Coupled with its educational research the College issues a scientific educational periodical written almost exclusively by the staff, while members of the staff are from time to time afforded opportunities of visiting foreign countries on study leave. In addition to the help and advice afforded by the inspectorial staff, teachers in rural districts receive the advantage of tuition by lectures and correspondence from members of the Training College staff. The Department also arranges for schools of instruction in various subjects during vacations.

(ii) *Victoria.* During recent years the educational and professional attainments of the general body of teachers in Victoria have greatly improved. Prior to the establishment of the High Schools, the pupil or junior teachers were recruited from the ranks of those who had obtained the Merit Certificate in the eighth grade of the elementary schools, and the acquirement of the necessary literary qualifications for promotion was greatly hindered by the circumstance that they were engaged in teaching for the greater portion of the day. Under present conditions, candidates spend at least two years in a High School, and consequently enter on their professional duties with a better mental and physical equipment. A number of High School pupils after serving as junior teachers for a year is awarded studentships at the Training College. The present Training College dates back to 1874, but during the retrenchment period, viz., from 1893 to 1900, it was closed. The institution was reopened in February, 1900, with an enrolment of 57 students. In addition to the metropolitan institution there are now branch Training Colleges at Ballarat and Bendigo. At the end of the year 1926 the students in training numbered 386. In addition to the correspondence courses and the Saturday and evening classes, classes are conducted for private kindergarten students, and for students of manual and domestic arts. Several practising schools are attached to the Training College, and infant rooms with attached kindergartens have been specially equipped for the training of infant teachers. The University High School gives secondary teaching practice to both departmental and private students. Five courses of training are provided for at the Melbourne College, i.e., for kindergarten or infant teachers, for primary teachers, for secondary teachers, for teachers of manual arts, and for teachers of domestic arts. The branch institutions at Ballarat and Bendigo will devote their attention chiefly to training teachers for work in the rural schools. Teachers are also greatly helped by district Conferences, and by special training at the Vacation Schools. Excellent results have been attained at the psychological laboratory attached to the Training College.

(iii) *Queensland.* The great majority of the teachers in Queensland originated in the pupil-teacher system, under which beginners, at the age of fourteen or thereabouts, were selected from the senior classes of the primary schools and placed in charge of classes, their efforts being to some extent supervised by the head teachers or senior assistants. In addition to the strain involved in teaching, the neophytes had to prepare notes of lessons, and to study for the annual examinations. During recent years, however, the juniors have been largely recruited from the secondary schools, and their more advanced physical and mental development renders them better fitted for their duties. At the end of 1926 there were 172 of these apprentice-teachers receiving tuition at the Training College. Arrangements have been made to increase the number as early as possible, and in order to attract candidates of a suitable type, a number of senior and junior teacher-scholarships is offered annually, while provision has been made for training a number of student teachers at the larger State schools.

At the Training College, which was opened in 1914, the activities comprise—(*a*) training of teacher-scholarship holders; (*b*) short courses of training for unclassified teachers selected from small country schools; and (*c*) tutorial classes and correspondence tuition courses to assist students preparing for departmental examinations or for matriculation. During 1926 the number of students under training or tuition was 653, comprising 30 senior and 142 junior scholarship holders, 133 teachers at evening classes, 20 short course students, and 216 teachers receiving tuition by correspondence. In addition, 112 students, principally public servants, were receiving tuition at evening classes.

(iv) *South Australia.* In preceding Year Books a brief account was given of the scheme of training for teachers introduced in 1920. (See No. 17, p. 461.) During the year 1925 additional facilities were provided for instruction in domestic art, woodwork, and elementary agriculture. Some difficulty has been experienced in recent years in maintaining an adequate supply of trained teachers, owing to the shortage of men teachers required for small country schools that are unsuitable for women, the extension of super-primary education and the need for relieving teachers on sick leave. In 1926, 65 teachers who had left the service were re-employed, and after a brief training 79 suitable persons, chiefly ex-monitors or High School students were appointed to other vacancies. The total number of students in attendance at the Training College in January, 1927, was 322. Practical work in teaching is carried out at selected schools for the various types of teachers. Lectures on subnormality and delinquency in children were given for the first time in 1925. The disability under which the College has laboured for many years through having no premises of its own has been remedied by the erection of a specially-designed building.

(v) *Western Australia.* A Training College for teachers was opened at Claremont in 1902. The original building provided accommodation for 60 students, but extensions were opened in 1908 and the number in training in 1926 was 207. Of the long-course students, 41 were in the first year, and 30 in the second year, while 14 were taking the special course for graduates and third year students, and 3 the special course for teachers of domestic science. The remaining 119 were taking the one year's course for teachers of country schools. A fair proportion of the full-course students attends lectures at the University, and some remain for a third or fourth year to complete degree work. In addition to the ordinary schools at which teachers gain professional experience, special practising schools have been established for the proper training in teaching and managing the smaller country schools. The standard for entry into the teaching profession has been considerably raised during recent years. Formerly young people were taken at the age of fourteen years from the primary schools and appointed as "pupil" teachers. At present the probationary teachers or monitors must be seventeen years of age, and are expected to possess a good secondary education. After a short period of probation they enter the Training College for special professional training. University graduates receive a special course of one year's duration. Untrained applicants are appointed only when the supply of trained teachers is insufficient. The teachers in the metropolis are greatly helped by periodical conferences of inspectors and teachers, while in rural areas schools of instruction are conducted by inspectors at convenient centres. Teachers in isolated areas are assisted by visiting teachers in the organization of manual and agricultural work, and receive help also from the correspondence classes.

(vi) *Tasmania.* During 1917 the scheme for the training of teachers was recast and grouped in four divisions :—(1) A short course to supply the professional training required for the less important positions in the primary schools and for teachers of the smaller provisional and Sixth Class schools; (2) Training of infant teachers; (3) Training for positions in the larger primary schools; and (4) Training of high school teachers. Practical training for the various classes is given in well-equipped practising schools and in model small schools. The inspectors hold schools of instruction for teachers of small schools, and teachers of moderate attainments are also helped by the Correspondence School. The enrolment at the Training College in 1926 numbered 78.

7. **Expenditure.**—(i) *Maintenance—All Schools.* The net expenditure on maintenance in all grades of schools, excepting technical schools, and the cost per head of average attendance, for the five years ended 1926 are shown below. The figures do not include expenditure on buildings, which is given separately in a subsequent table.

STATE SCHOOLS.—EXPENDITURE ON MAINTENANCE, 1922 TO 1926.

Year.	N.S.W.	Victoria.	Q'land.	S Aust.	W. Aust.	Tasmania.	Nor. Ter.	Total.
				TOTAL.				
	£	£	£	£	£	£	£	£
1922	3,234,549	1,759,692	1,186,537	444,373	521,110	239,117	2,943	7,388,321
1923	3,185,085	1,814,185	1,200,636	491,341	526,739	225,261	3,463	7,446,710
1924	3,296,669	1,859,809	1,264,005	538,744	543,395	240,787	4,015	7,747,424
1925	3,520,903	1,963,214	1,364,844	597,960	548,426	246,429	4,326	8,246,102
1926	3,626,447	2,132,519	1,406,853	710,499	556,748	251,307	4,443	8,688,816
				PER HEAD OF AVERAGE ATTENDANCE.				
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
1922	12 11 3	9 8 8	11 10 10	6 15 0	10 16 1	8 16 1	15 16 5	10 14 8
1923	12 7 1	9 17 9	11 9 1	7 7 4	10 17 0	8 12 0	18 18 6	10 17 4
1924	12 5 6	9 16 10	11 16 7	7 16 8	11 5 0	8 19 0	19 6 1	10 19 6
1925	12 18 3	10 1 3	12 9 0	8 12 4	11 3 5	8 19 0	20 10 0	11 8 9
1926	13 3 3	10 16 6	12 12 10	9 17 10	11 4 6	9 0 3	18 19 9	11 17 10

The combined growth in cost of maintenance during the last five years has been brought about by the higher salaries and allowances paid to teachers, and the increased expenditure in connexion with the supply of materials and equipment.

The figures for Queensland include expenditure in connexion with State scholarship holders at Grammar Schools and other approved secondary institutions, allowance being made for the number of these pupils in arriving at the cost per head of attendance.

(ii) *Maintenance—Secondary Schools.* The figures given in the preceding table refer to expenditure on maintenance of all State primary and secondary schools, exclusive of technical colleges. It has been thought desirable by the State Education Departments to give separate information in regard to the cost of secondary education. Any satisfactory estimate of this nature is, however, rendered difficult by the circumstance that there is no exactly comparable definition of the term "secondary" as applied in the various States, while difficulties arise in connexion with the correct apportionment amongst the various branches of expenses of administration, inspection, and the training of teachers. A further complication is caused by the fact that both elementary and higher education are in some instances given in the same school and by the same teacher. The figures quoted in regard to cost hereunder have been extracted from the Reports of the State Education Departments, and are subject to the qualifications above enumerated.

STATE SECONDARY SCHOOLS.—EXPENDITURE ON MAINTENANCE, 1926.

State.	Cost.	Cost Per Head of Population.
	£	s. d.
New South Wales	411,854	3 6
Victoria	236,273	3 9
Queensland	109,870	2 6
South Australia	80,856	2 11
Western Australia	101,750	5 5
Tasmania	17,078	1 7

The figures in all cases are exclusive of cost of buildings. For Queensland, the figure quoted does not include the cost of the Agricultural High School and College, which amounted in 1926 to £35,365.

(iii) *Buildings.* Expenditure on school buildings in each of the years quoted was as follows :—

STATE SCHOOLS.—EXPENDITURE ON BUILDINGS, 1922 TO 1926.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Ter.	Total.
	£	£	£	£	£	£	£	£
1922	464,015	349,562	83,754	70,506	81,773	31,329	..	1,080,939
1923	628,592	481,372	93,760	85,024	55,173	12,751	..	1,356,672
1924	766,019	531,571	157,683	107,466	71,634	20,643	184	1,655,200
1925	621,109	459,303	126,392	138,132	63,373	43,248	823	1,452,380
1926	638,387	508,121	138,784	231,207	57,337	34,716	132	1,608,684

The large increases in expenditure shown in most instances during the last four years were due to the efforts made to overtake arrears in necessary buildings and repairs.

(iv) *Total.* The net total cost during the year 1926 was as follows :—

STATE SCHOOLS.—NET TOTAL COST, 1926.

Item.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Ter.	Total.
	£	£	£	£	£	£	£	£
Net cost of education, including buildings ..	4,264,834	2,640,640	1,545,637	941,706	614,085	286,023	4,575	10,297,500

The figures in this and the preceding tables refer to all grades of State schools (with the exception of technical schools), and include evening schools. Including buildings, the net cost per scholar in average attendance for the whole of the State schools in Australia amounted in 1926 to £14 1s. 11d., as compared with £4 9s. 3d. in 1901.

8. School Savings Banks.—In New South Wales the control of these institutions was taken over in 1924 by the Government Savings Bank, which allows interest on the children's deposits. Banks were in operation at 773 schools in 1926, the number of accounts being 62,449, and the amount at credit £64,538. In Victoria banks were in operation at 1,829 schools at the 30th June, 1927. On the same date the number of depositors amounted to 119,745 and balances at credit to £178,741. In South Australia, there were 47,346 depositors, with £71,313 to their credit; and in Western Australia, there were 683 school banks, with 47,421 depositors and £81,493 to their credit.

§ 3. Private Schools.[*]

1. Returns for 1926.—The following table shows the number of private schools, together with the teachers engaged therein, and the enrolment and average attendance in 1926:—

PRIVATE SCHOOLS, 1926.

State.	Schools.	Teachers.	Enrolment.	Average Attendance.
New South Wales	704	4,320	100,798	69,205
Victoria	493	2,220	65,180	(a)56,000
Queensland	187	1,185	31,513	23,942
South Australia	181	902	17,921	13,815
Western Australia	120	540	11,766	10,635
Tasmania	75	341	6,266	5,284
Northern Territory	1	4	122	104
Total	1,761	9,512	233,566	178,985

(a) Estimated.

The totals for New South Wales include returns from the Sydney Grammar School, which receives a yearly State subsidy of £1,500, and which, in 1926, had an enrolment of 653, and an average attendance of 570.

The figures for Queensland include the returns from Grammar Schools, of which there are ten—six for boys and four for girls, with an enrolment of 1,266 boys and 791 girls. These schools are governed by boards of trustees, partly nominated by Government, and partly by the subscribers to the funds. The trustees make regulations regarding the fees of scholars, the salaries of teachers, and generally for the management of the schools. The total Government aid received in 1926 amounted to £19,197. In addition, a sum of £12,753 was received for Government scholarships and bursars' fees. The Grammar Schools are inspected annually by officers of the Department of Public Instruction.

2. Growth of Private Schools.—The enrolment and average attendance at private schools during 1891, 1901, 1911, and in each year of the period 1922 to 1926 are as follows:—

PRIVATE SCHOOLS.—ENROLMENT AND ATTENDANCE, 1891 TO 1926.

Year.	Enrolment.	Average Attendance.	Year.	Enrolment.	Average Attendance.
1891	124,485	99,588	1923	206,910	169,466
1901	148,659	120,742	1924	229,543	175,614
1911	160,794	132,588	1925	228,564	175,283
1922	201,574	167,362	1926	233,566	178,985

The increase in average attendance during the last five years amounted to about 9 per cent.

3. Registration of Private Schools.—Conditions in regard to the registration of private schools were alluded to in previous Year Books (*vide* No. 18, p. 451), but consideration of space precludes the repetition of this information in the present issue.

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[*] Private schools include all schools not wholly under State control. The term "private," though popularly applied, is, of course, a misnomer.

§ 4. Free Kindergartens.

The following information regarding Free Kindergartens has been compiled from particulars supplied by the principals of the chief institutions or the organizing secretary in each State, except in the case of Western Australia, the details for which were furnished by the Education Department.

FREE KINDERGARTENS, 1926.

State.	No. of Schools.	Average Attendance.	Permanent Instructors.	Student Teachers.	Voluntary Assistants.
New South Wales (Sydney)	14	760	28	25	50
Victoria (Melbourne) ..	28	1,522	75	39	406
(Ballarat) ..	1	45	2	..	13
Queensland (Brisbane) ..	6	(a) 300	7	..	2
South Australia (Adelaide)	9	282	9	26	1
Western Australia (Perth)	6	236	9	..	5
Tasmania (Hobart) ..	4	140	6	6	..
(Launceston) ..	2	81	4	3	4
Total	70	3,366	140	99	481

(a) Estimate.

In New South Wales there were 75 students at the Kindergarten Training College. At the Melbourne College, 42 students were in training. The Brisbane Training College had 16 students in training during 1926–7, the Training College at Adelaide 26, and at Perth 22. Fourteen students were in training at Hobart, and 3 at Launceston.

The information given above refers to institutions under private kindergarten unions or associations, and is exclusive of the kindergarten branches in the Government schools of the various States.

§ 5. Universities.

1. **Origin and Development.**—(i) *University of Sydney.* The Act of Incorporation of the University of Sydney received Royal Assent on the 1st October, 1850, and the first Senate was appointed on the 24th December of that year. The first matriculation examination was held in October, 1852, when 24 candidates passed the required test, and the formal inauguration ceremony took place on the 11th October of the same year. A Royal Charter was granted to the University on the 27th February, 1858. Women students were admitted in 1881. The passing of the University (Amendment) Act of 1912 marks an important epoch in the development of the educational system of New South Wales. The Act aims at placing the University in a more effective position as the culminating point in a thoroughly co-ordinated system of State education, and it is claimed that the passing of this measure made the educational system—from the Primary Schools through the Secondary Schools to the Technical Colleges or to the University—form a progressive and continuous whole. More extended reference to this Act and to the liberal scheme of exhibitions provided thereunder for scholars from the State and Private Schools was given in Official Year Book No. 15, page 745. At the inception of the University there were only three professorships. The present staff consists of 34 professors, 11 associate, 4 assistant professors, and 159 lecturers and demonstrators. There are, in addition, 15 honorary lecturers.

(ii) *University of Melbourne.* This institution was established by Act of Parliament, assented to on the 22nd January, 1853, and its first council was appointed on the 11th April of that year. The foundation stone of the main building was laid on the 3rd July, 1854, and the University was formally inaugurated on the 13th April, 1855. By Royal Letters Patent, issued in 1859, its degrees are, like those of the Sydney institution, declared of equal status with those of any other University in the British Empire. Women students were admitted to degree courses for the first time in 1880. The University, which began in 1855 with schools of Arts and Law, has now a staff of 22 professors, 5 associate professors, 135 lecturers and demonstrators, and 146 various assistants. The Conservatorium of Music has a staff numbering 50.

(iii) *University of Queensland.* The Act to establish the University of Queensland was passed in 1909, and the first Senate was appointed on the 14th April, 1910. The University was opened on the 14th March, 1911, when 60 students were matriculated.

Provision has been made for a Correspondence Study department in connexion with the institution, and at the request of the Brisbane branch of the Workers' Educational Association weekly lectures are given in History and Economics. At the present time there are 13 professors, with 20 independent lecturers, 3 assistant lecturers and demonstrators, 19 miscellaneous assistants, 4 part-time lecturers, and 13 student demonstrators.

(iv) *University of Adelaide.* This University was established by Act of Parliament in 1874. Its origin and progress were largely due to the munificence of the late Sir Walter Watson Hughes and Sir Thomas Elder, G.C.M.G., the total gifts of the latter amounting to over £100,000. Additional benefactions are alluded to under "3. University Revenue" hereinafter. The academical work of the institution was commenced in March, 1876, when 8 matriculated and 52 non-graduating students attended lectures. The foundation stone of the University buildings was laid on the 30th July, 1879, and the buildings were opened in April, 1882. In 1881, by Royal Letters Patent, the degrees granted by the institution were recognized as of equal distinction with those of any University in the British Empire. The Elder Conservatorium of Music was opened in 1898. Power was given by Act of Parliament in 1880 to grant degrees to women. At first there were only four professorships in the University, whereas the present staff consists of 19 professors, 118 lecturers and demonstrators, and 81 miscellaneous assistants, while the staff at the Conservatorium, included in the foregoing figures, numbers 20.

(v) *University of Western Australia.* The University of Western Australia was established under an Act which received Royal assent on the 16th February, 1911, and the first Senate was appointed on the 13th February, 1912. The University was opened in March, 1913. There are now 10 professors, in addition to 31 lecturers and demonstrators and 13 miscellaneous assistants. Associates of the Perth Technical School or the Kalgoorlie School of Mines may, under prescribed conditions, obtain a reduction in period of attendance for the B.E. degree, and students from the School of Mines may be admitted to the examinations and take portion of their course at the University. Under the will of the first chancellor, Sir J. Winthrop Hackett, the University will receive a sum of £425,000, in addition to the endowment of the Chair of Agriculture.

(vi) *University of Tasmania.* The Act to establish the University of Tasmania (Hobart) was assented to on the 5th December, 1889. At the present time the institution, which is small but efficient, possesses a staff of 9 professors, 15 independent lecturers, and 4 assistant lecturers and demonstrators. Under Statutes the Zeehan School of Mines and Metallurgy and the School of Mines and Industries at Mount Lyell were affiliated to the University.

2. Teachers and Students.—The following table shows the number of professors and lecturers, and the students in attendance at each of the State Universities during the year 1926 :—

UNIVERSITIES.—TEACHERS AND STUDENTS, 1926.

University.	Professors.	Lecturers and Demonstrators.	Students attending Lectures. Matriculated.	Students attending Lectures. Non-matriculated.	Students attending Lectures. Total.
Sydney	49	174	1,933	489	2,422
Melbourne	27	135	..	..	(a)2,624
Queensland (Brisbane) ..	13	23	390	91	481
Adelaide	19	118	819	756	(b)1,575
Western Australia (Perth) ..	10	31	368	(c)193	561
Tasmania (Hobart)	9	19	159	49	208

(a) Exclusive of 230 music students. (b) Exclusive of 590 music students. (c) Short courses in music, history of painting, etc.

Students at the Conservatorium of Music have been excluded in the case of Melbourne and Adelaide. The Conservatorium in Sydney, while attached to the Education Department, is not under the control of the University.

3. University Revenue.—The income of the Universities from all sources during the year 1926 was as shown in the table below. The figures in the column "private foundations" refer to income from investments, the cash value of benefactions received during the year being shown separately in the appended notes:

UNIVERSITIES.—REVENUE, 1926.

University.	Government Grants.		Fees.	Private Foundations.	Other.	Total.
	Ordinary.	Special.				
	£	£	£	£	£	£
Sydney	32,000	(a)70,168	43,371	(b)92,003	5,008	242,550
Melbourne ..	(c)66,467	..	66,621	56,023	9,806	198,917
Queensland (Brisbane)	22,300	750	9,305	(e)24,466	10,414	67,235
Adelaide	24,000	19,368	24,373	(d)42,120	611	110,472
Western Australia (Perth) ..	20,750	..	1,706	654	2,607	25,717
Tasmania (Hobart)	12,959	..	2,860	1,561	78	17,458
Total ..	178,476	90,286	148,236	216,827	28,524	662,349

(a) Includes special grant of £3,781 from Commonwealth and States Governments. (b) Includes new foundations, £26,485. (c) Includes statutory endowment, £62,000, annual parliamentary appropriation, £4,300. (d) Includes new foundations, £26,205. (e) Includes £13,124 from the McCaughey bequest.

The extent to which the older-established Universities have benefited by private munificence will be apparent from the following table. (Reference to gifts and bequests to the smaller Universities will be found on the next page.) The amounts quoted represent actual cash received, special mention being made of individual gifts of £5,000 and over. In some instances the figures include annual gifts or annual income from donations, and are exclusive of bequests of books, scientific apparatus, etc., the cash value of which cannot be stated:—

UNIVERSITIES.—BENEFACTIONS.

University of Sydney.		University of Melbourne.		University of Adelaide.	
Donor.	Amount.	Donor.	Amount.	Donor.	Amount.
	£		£		£
J. H. Challis ..	276,750	Sidney Myer ..	50,000	Sir Thos. Elder ..	98,760
Sir P. N. Russell ..	100,000	Sir Samuel Gillott ..	34,500	The Hon. Sir Langdon Bonython	60,000
W. O. Watt ..	63,281	Sir Samuel Wilson ..	30,000	Mrs. Jane Marks	30,000
Thos. Fisher ..	30,000	James Stewart ..	25,624	R. Barr Smith and family ..	21,150
Miss Elizabeth Caird	9,576	Hon. Francis Ormond	20,000	Sir W. Hughes ..	20,000
Sir Hugh Dixson ..	9,050	John Hastie ..	19,140	Family of John Darling ..	15,000
Edwin Dalton ..	8,000	R. B. Ritchie ..	14,000	Mrs. G. A. Jury	12,000
J. F. Archibald ..	7,175	David Aitchison and Miss E. C. Hickman	13,861	Hon. J. H. Angas	10,000
Hon. Sir W. Macleay	6,000	Robert Dixson ..	10,837	Sir Josiah Symon	10,000
Mrs. Hovell ..	6,000	Mrs. E. R. Moran ..	10,000	Sir Joseph Verco	5,000
Thos. Walker ..	6,200	Sir J. M. and Lady Higgins	9,700	Other donations	37,573
Mrs. M. H. Dalley ..	5,000	John Dixon Wyselaskie	8,400		
Miss E. S. Hebden ..	5,000	Edward Wilson ("Argus" Trust) ..	11,100		
Other donations ..	79,725	W. R. Pearson ..	7,800		
		R. J. Fletcher ..	7,500		
		Mr. and Mrs. F. Knight	6,000		
		David Kay ..	5,764		
		E. J. B. Nunn ..	5,300		
		Cuming Smith & Co. Ltd.	5,250		
		Subscribers, Ormond Exhibitions in Music	5,217		
		Henry T. Dwight ..	5,000		
		Wm. Thos. Mollison	5,000		
		E. Truby Williams ..	5,000		
		Other donations ..	106,770		
Total ..	611,757	Total	421,763	Total ..	319,483

The figures for the Sydney University are exclusive of the bequest by the late Hon. Sir Samuel McCaughey, M.L.C., of property producing an annual income of £19,000 to be applied to the general purposes of the University.

The credit balances of some of the above endowments now amount to very considerable sums. For example, on the 31st December, 1926, the Challis Fund amounted to over £326,000, and the Fisher Fund to £40,000, while in the case of Melbourne University the Stewart Fund on the 31st December, 1926, stood at £30,500, the Dixson Fund at £17,000, the Hastie fund at £27,000, and the Gillott fund at £41,000.

In addition to the above there were various other bequests to Sydney University—e.g., collection of Egyptian antiquities, etc., by Sir Charles Nicholson, and Natural History collection by Mr. Geo. Masters, while the building for the Natural History Museum was given by Sir W. Macleay. Numerous prizes and scholarships have also been given to the various colleges. In Melbourne, the Hon. Francis Ormond's benefactions to Ormond College amounted to about £108,000.

Private benefactions to the University of Queensland amounted in 1926 to £120,900, of which £60,000 was received from the trustees of the late Sir Samuel McCaughey and £20,000 from the Walter and Eliza Hall Trust. A gift of £10,000 was received from the British Red Cross Association in 1920, and a similar sum was presented in 1923 by Miss Kate Garrick.

With a view to advancing the cause of education in agriculture, forestry and allied subjects, Mr. Peter Waite transferred to the Adelaide University in 1914 the whole of the valuable Urrbrae estate at Glen Osmond. The estate comprises 134 acres of land with a fine mansion. In 1915, he presented the estate of Claremont and part of Netherby, comprising 165 acres, adjoining Urrbrae, while in 1918 he transferred to the University 5,880 shares in a public company to provide funds to enable the University to utilize the land for the purposes intended. The value of these bequests is not stated in the University returns. In addition to the sum of £30,000 mentioned above, presented by Mrs. Jane Marks in 1922, Adelaide University benefited during that year by a gift of property valued at £20,000, presented by Mrs. A. M. Simpson and Miss A. F. Keith Sheridan.

In Western Australia the Chair of Agriculture was founded by an endowment of Sir Winthrop Hackett, and the University also benefits to the extent of £425,000 under the terms of his will. Recently the University received an estate valued at £60,000 from the late Robert John Gledden.

Private benefactions to the University of Tasmania amount to about £6,800, this figure, however, including in some instances amounts received annually, and not including bequests of books, apparatus, etc., the value of which was not stated.

4. **University Expenditure.**—For the year 1926 the expenditure by the Universities under various headings was as follows :—

UNIVERSITIES.—EXPENDITURE, 1926.

University.	Salaries and Administration.	Scholarships, Bursaries, etc.	General Maintenance.	Buildings and Grounds.	Other.	Total.
	£	£	£	£	£	£
Sydney	135,293	6,587	42,587	(a)17,657	11,684	213,808
Melbourne	104,683	2,464	7,373	5,282	(b)27,335	147,137
Queensland (Brisbane) ..	27,560	2,761	8,964	865	(g)23,372	63,522
Adelaide	50,433	1,098	2,205	(c) 2,331	(d)21,807	77,874
Western Australia (Perth)	20,823	375	4,203	375	(e) 2,572	28,348
Tasmania (Hobart) ..	10,753	1,266	2,938	1,116	(f) 1,160	17,233
Total	349,545	14,551	68,270	27,626	87,930	547,922

(a) Includes £17,012, new buildings. (b) Includes laboratory and research, £10,584. (c) Not including £10,647 expended from allocation account, and £11,504 expended by Government from loans. (d) Includes laboratory and research, £12,853. (e) Laboratory and research. (f) Laboratory and research, £909. (g) Includes laboratory and research, £7,932.

5. University Extension.—Extension lectures were instituted at Sydney University in 1886, and in 1892 a Board was appointed which receives and considers applications from country centres, and makes provision for engaging lecturers and managing the entire business connected with the various courses. The Board also arranges for courses of lectures in other States. In 1926 provision was made for 12 courses, 8 of which were delivered in Sydney and suburbs, and 4 in country towns.

Evening tutorial classes open to both matriculated and unmatriculated students have been established in various centres in accordance with the University Amendment Act of 1912. Fifty-seven of these classes, attended by about 1,700 students, were in operation during 1926.

University extension lectures in Victoria date from the year 1891, when a Board was appointed by the Melbourne University for the purpose of appointing lecturers and holding classes and examinations at such places and in such subjects as it might think fit. A joint committee composed of 8 representatives of the University, 4 from the Workers' Educational Association, 2 from the Trades Hall Council, and 1 other appointed after consultation with the Board, controls the organization of tutorial classes. The Board also arranges for advising country students by correspondence on social and cultural subjects. The tutorial classes during the year numbered 24, of which 12 were held in Melbourne, 6 in the suburbs, and 6 in country towns, the combined attendance reaching a little over 1,000. In addition 234 students were receiving tuition by correspondence. A University Public Fortnight held at the end of June was attended by 800 members of the general public, and the Board is considering a proposal to make this feature of its work an annual one. Extension lectures were given in the city and in 8 country centres, and a number of wireless lecturettes was broadcast during the year.

In Queensland the activities previously conducted separately by representatives of the University and of the Workers' Tutorial Classes were amalgamated in 1926 under a general committee for tutorial classes and public lectures. During the year 8 tutorial classes attended by 175 students were held in Brisbane, while there was a large enrolment in the correspondence classes. Four lectures were given by members of the University staff in Brisbane, and vacation courses were delivered in several country centres.

The Adelaide University has instituted short courses of extension lectures in Arts and Science, to which students are admitted on payment of a nominal fee. Public intimation of these lectures is made from time to time during the session. Three lectures were delivered in 1926. Enrolments at the twelve tutorial classes and the various study circles, etc., in 1926 numbered 1,148.

In Western Australia provision has been made for the giving of courses of extension lectures in Perth and suburbs, also—by arrangement with local committees—in country centres. During the year 1926, four lectures were given in Perth, and 44 in the country. The professor of agriculture visits the chief farming districts for the purpose of giving lectures to, and holding conferences with the primary producers. Special short courses for farmers are given at the University, and 59 broadcast lectures were given from the Westralian Farmers' station. Short courses of popular lectures are also given in the evening by various professors at the University.

In Tasmania during 1919 the University Extension Board which had previously controlled the work of providing extra-mural tuition was replaced by the Committee for Tutorial Classes. The Professor of Economics is director of tutorial classes, and visits as many centres as possible during the year. Eight full classes with an enrolment of 328 students were held during 1926. Effective students (60 per cent. attendance) numbered 205.

6. Workers' Educational Association.—In 1913 Workers' Educational Associations were formed in all the States of Australia, and later in New Zealand. The movement has for its object the bringing of the University into closer relationship with the masses of the people, and thereby providing for the higher education of the workers in civic and cultural subjects. The work of the Association is gaining in popularity year by year, and the growth of the movement has been phenomenal. The Government of New South Wales at first granted the University of Sydney the sum of £1,000 to initiate a scheme for tutorial classes. There are now direct grants from all State Governments except

Western Australia, and an additional University grant in New Zealand. The particulars of grants for classes are as follow:—New South Wales, £5,970, 61 classes; Victoria, £4,500, 30 tutorial classes and extension work; Tasmania, £1,780, 20 classes; South Australia, £2,550, 23 classes; Queensland, £3,000, 8 classes and 24 study circles. In addition, the New South Wales Association receives a Government grant for general organizing purposes of £400, paid on the basis of £1 for £1 on subscriptions and donations up to this amount. Correspondence courses form a strong feature of the work in Queensland, groups of construction workers and other outback pioneers being reached thereby. The total number of students throughout Australia is approximately 5,000, the greater number of whom are taking three-year courses while working at their daily occupations. An analysis of these occupations showed that the great majority of the students were wage-earners. The principal subjects chosen in all States are Industrial History, Economics, Political Science, and Sociology, but there is an increasing number of classes in other subjects such as History, Psychology, Philosophy, Literature, Music, Physiology, and Biology. Each University co-operates with the W.E.A. in the formation of a joint committee which appoints tutors and generally supervises the work with the assistance of a University officer with the title of Director of Tutorial Classes. In addition to the longer and more serious courses, a great many preparatory classes, study circles, and summer schools are organized by the Association, numerous courses of public lectures are delivered, educational conferences promoted, and an extensive book service is spreading educational literature throughout Australia. A strong feature of the work of the Association is the organization of a number of country branches to carry facilities for higher education to districts in which these have hitherto been lacking This work has been particularly successful in New South Wales, Victoria, Queensland, and Tasmania. A Commonwealth Conference held at Adelaide in 1918 resulted in the formation of a federal organization now known as "The Workers' Educational Association of Australia." Its central office is in the Education Department, Sydney. The Federal Council co-ordinates the activities of the W.E.A. in all States, and has inaugurated a series of publications on sociological and economic subjects. Nine books have been published to date, including "Modern Economic History" by Professor H. Heaton; "Marx and Modern Thought," by G. V. Portus; "Shadows and Realities of Government," by F. A. Bland; "A New Province for Law and Order," by Mr. Justice Higgins; "A Life of Society," by Prof. J. B. Condliffe; "A Study in Social Economics: The Hunter River Valley," by F. R. E. Mauldon. The Federal Council also publishes "The Highway," a monthly magazine now in its ninth year, which contains notes on the movement, and general discussions on educational work.

§ 6. Technical Education.

1. **General.**—Although provision has been made in all of the States in respect to many necessary forms of technical education, the total provision made would imply that this branch of education has not been regarded as of outstanding importance. As will be seen later on, the expenditure on technical education for the whole of Australia is comparatively small.

2. **New South Wales.**—Some account of the origin and development of technical education in New South Wales was given in Official Year Book No. 15, page 750, but considerations of space preclude its repetition in this issue. It may be noted, however, that technical education had its origin in this State in 1883, but it was not until the year 1913 that a definitely co-ordinated scheme was adopted. The branch Technical Colleges, with the exception of those at Newcastle and Broken Hill, were then superseded by Trade Schools, admission to which was restricted to those actively engaged in the trade concerned, and was dependent also on the possession of a certain degree of preparatory knowledge. Courses of instruction in which workshop experience is not necessary to train

the efficient worker—such as Art, Science, and Commercial Courses—are, however, open to all students who have the requisite preliminary knowledge. Advisory committees were appointed for each trade or group of trades and have proved very helpful. The first two or three years' course of instruction is given in the Trade Schools, and students may then go on for a further two or three years' advanced teaching at the Technical Colleges. The higher courses embrace instruction in advanced trades' work qualifying for the position of manager or foreman, but no attempt is made to train for the professional standing. It is hoped, however, that the scheme will develop so that part of the graduates may proceed to the University. Admission to the higher courses will eventually be restricted to those who have either graduated in the Trade Schools of the Department, or who evidence possession of a similar standard of knowledge. In addition to the courses given in the Technical Colleges and Trade Schools, elementary instruction has been provided at various centres where there has been a demand for it, and provision has been made also for special courses of instruction by correspondence. A liberal scheme of scholarships has been drawn up for students passing from the day or evening Junior Technical Schools or Domestic Science Schools, to the Trades and Science Schools, as well as scholarships to the University at the close of the diploma course.

The table below gives some idea of the development of technical education in New South Wales during the five years 1922 to 1926 :—

TECHNICAL EDUCATION.—NEW SOUTH WALES, 1922 TO 1926.

Year.	Number of Classes.	Number of Enrolments.	Individual Students.	Number of Lecturers and Teachers.	Fees Received.
					£
1922	646	21,328	9,806	470	13,627
1923	664	23,496	10,234	478	14,042
1924	674	25,462	11,386	499	16,644
1925	679	26,796	11,787	519	17,882
1926	688	28,764	12,089	527	18,938

The Superintendent of Technical Education stresses the need for greater financial provision to meet the growing demand for technical training, and points out the advantages that would accrue from the establishment of a system of daylight instruction.

3. **Victoria.**—Technical instruction in mining has for many years received considerable attention in Victoria, the Ballarat School of Mines, which was established as far back as 1870, having achieved an Australasian reputation. Fine work was also done at the School of Mines in Bendigo, and later on excellent courses of training were evolved at The Working Men's College in Melbourne. The general scheme of instruction, however, lacked cohesion, and it was not until after the publication of the Report of the Royal Commission on Technical Education, which was appointed in 1899, that many defects were remedied. Prior to 1910 the whole of the schools were under the control of local councils, but in the year mentioned the control passed to the Education Department. At the end of 1926 there were 27 Technical Schools receiving State aid. The largest technical institution in Melbourne is the Working Men's College, founded in 1887. The College, in addition to giving instruction in a large number of technical subjects, is also a School of Mines. During 1926 the classes in operation numbered 178, and the average enrolments per term amounted to 2,600. Such institutions as the Swinburne Technical College, and the Ballarat and Bendigo Schools of Mines, have also an extensive curriculum embracing the more important industrial subjects. Special attention has been given in recent years to the provision of technical education for girls. There are, moreover, 25 Junior Technical Schools in existence, giving a two or three years' course of instruction to boys between the ages of 12½ and 15 years, thereby preparing them for the more advanced teaching in the higher schools.

Particulars regarding the growth of technical education in Victoria during the last five years are given in the appended table :—

TECHNICAL EDUCATION.—VICTORIA, 1922 TO 1926.

Year.	Number of Classes.	Number of Enrolments.	Average Attendance.	Fees Received.
				£
1922	120	16,168	12,236	28,725
1923	125	17,679	12,804	32,286
1924	122	19,234	13,832	32,404
1925	125	19,439	15,018	31,250
1926	135	21,431	16,500	49,799

In his report for the year 1925 the Chief Inspector of Technical Schools alludes to the difficulty of obtaining and retaining the services of a sufficient trained technical staff. During 1926 the full-time teachers employed in technical schools numbered 274, and the part-time teachers or outside experts numbered 299.

4. **Queensland.**—Up to the passing of the "Technical Instruction Act of 1908," technical education in Queensland was controlled by local committees, the State simply providing financial aid. Under the provisions of this Act, the State took over the technical colleges at Brisbane, South Brisbane and West End, and formed therefrom a Central Technical College. By an amending Act in 1918, power was taken to assume the control of other technical institutions as opportunity offered. Twelve colleges are now directly controlled by the Department and five by local committees. The Department's policy of combining Technical Colleges with High Schools has proved very successful. During 1926 there were seventeen technical colleges in operation, while classes in technical subjects were held in a number of smaller centres. A certain amount of technical and vocational work is also provided for at the Rural Schools (See § 2, 4 (vi.c.)). Two Travelling Domestic Science Schools and a Manual Training School for boys have been constructed to meet the needs of districts where the population is not sufficient to warrant the establishment of permanent classes, and these institutions have been very successful. The schools are housed in specially-fitted railway cars, and remain for seven weeks at each of the towns visited. The progress of technical education since 1922 is shown in the following table :—

TECHNICAL EDUCATION.—QUEENSLAND, 1922 TO 1926.

Year.	Number of Classes.	Enrolments.	Estimated Average Weekly Attendance.	Number of Teachers	Fees Received.
					£
1922	512	12,069	10,000	396	14,549
1923	607	11,565	10,000	387	13,220
1924	611	13,002	11,000	364	13,633
1925	615	13,349	11,500	433	13,959
1926	(*a*)	13,871	11,600	444	13,780

(*a*) Not available.

Greater attention is being devoted to the development of trade classes, and under the Apprenticeship Act of 1924, apprenticeship is controlled by the Minister for Works, while committees consisting of representatives of employers and employees have been appointed for the various skilled trades. Attendance at apprentices' classes is compulsory in the towns to which the provisions of the scheme have been extended, and this has had the effect of considerably increasing the number of student hours of instruction as compared with earlier years.

In his Report for the year 1926 the Superintendent of Technical Education mentions that the complaint is sometimes made that the educational authorities are supplying the type of training which leads to city occupations rather than to rural callings, and points out that the vocations of the people are not dependent upon the educational facilities provided, but upon definite economic laws.

5. **South Australia.**—Prior to the year 1917 the condition of affairs in regard to technical education in South Australia was regarded by the Education Department as unsatisfactory. There was a School of Mines and Industries in Adelaide, and in addition Schools of Mines at Moonta, Port Pirie, Kapunda, Mount Gambier, and Gawler. While the Government bore the bulk of the cost of maintenance of these institutions, they were controlled by independent councils, and there was no regular co-ordination in regard to staffs, curriculum, etc. A Director of Technical Education was appointed in 1916, and the reorganization of the system was thereupon undertaken. The position in 1921 was, however, still unsatisfactory, as the control of technical education in the State rested with two bodies, (*a*) the Council of the South Australian School of Mines and Industries whose activities are confined to the metropolitan area; and (*b*) the technical branch of the Education Department, which deals with schools in the metropolis, as well as throughout the country districts. During that year, an amending Act dealing with the technical education of apprentices was passed, and, by proclamation, the scope of the original Act was widened so as to include over 150 separate trades. Regular meetings of the Apprentices Advisory Board were held, and improvements in conditions of apprenticeship were made on their recommendation. In 1926, 713 apprentices and probationers were enrolled in the various classes. The total number of registrations since the inception of the Act was 3,539, and of these 561 had completed the full three years' course and received tradesmen's certificates. Country Technical Schools in 1926 had an enrolment of 1,869, and at the Thebarton Technical High School the pupils numbered 236. By means of Saturday classes and special Vacation Schools, a large number of male teachers and a few women teachers have qualified as instructors in woodwork.

Particulars regarding the position of technical education in the State during the five years 1922 to 1926 are given hereunder :—

TECHNICAL EDUCATION.—SOUTH AUSTRALIA, 1922 TO 1926.

Year.	Number of Classes.	Enrolments.	Average Attendance.	Number of Teachers.	Fees Received.
					£
1922	311	10,609	7,875	160	6,008
1923	332	11,339	8,834	175	6,309
1924	421	12,312	9,416	185	6,465
1925	479	13,098	10,036	202	6,456
1926	536	13,363	10,395	201	7,910

6. **Western Australia.**—During the year 1926 the Perth Technical School had an average enrolment of 2,153 students each term. Courses in the faculties of arts, science, and engineering may be attended at this school, or at the Kalgoorlie School of Mines, these institutions being affiliated to the University for this purpose. The trade classes are well supported, and particular attention is devoted to subjects of value to the

skilled tradesman. Committees, including representatives of employers' and workers' unions, have been formed for each group of trades, and confer regularly with the trade instructors, make inspections, and furnish recommendations. Full time day classes in engineering are provided for pupils who have passed through the Junior Technical School, and a number of railway apprentices attends the day-classes at Perth and Midland Junction. Classes are also held for mechanics in the Postal Department. The average weekly attendance in 1926 at the Fremantle School was 1,277, at Midland Junction 214, at Boulder 372, at Kalgoorlie 162, and at Claremont 90. Smaller groups of classes were conducted at other centres. The schools are all under the control of the Education Department, the officer entrusted with the supervision being styled Director of Technical Education.

Returns for the last five years are embodied in the table hereunder :—

TECHNICAL EDUCATION.—WESTERN AUSTRALIA, 1922 TO 1926.

Year.	Number of Classes.	Enrolments.	Average Weekly Attendance.	Number of Teachers.	Fees Received.
					£
1922	449	6,920	(*a*)5,679	153	3,139
1923	446	6,850	(*b*)5,552	146	2,988
1924	451	7,002	(*c*)5,633	147	2,837
1925	453	7,487	(*d*)6,146	147	3,116
1926	432	7,869	(*e*)6,468	142	2,944

(*a*) 3,471 individual students. (*b*) 3,409 individual students. (*c*) 3,423 individual students. (*d*) 3,554 individual students. (*e*) 3,500 individual students.

7. **Tasmania.**—The scheme of technical education includes provision for courses of training in industrial, commercial, and domestic pursuits. Under the first-mentioned, junior technical schools, applied science schools, technical trade schools, and art and applied art schools have been established, and it is to this group that the activities of the Department have hitherto been almost exclusively confined. The co-operation of employers and employees has been obtained, and certain of the more advanced courses have been co-ordinated with the courses given at the University. There are Junior Technical Schools at Hobart, Launceston, and Queenstown, with a total enrolment in 1926 of 539. Senior Technical Schools are in operation at Hobart and Launceston organized into Departments of Engineering and Applied Science, Art, and Trade; and at Queenstown and Zeehan, courses in Metallurgical and Mining Engineering are undertaken. The Queenstown School is assisted by a subsidy given by the Mount Lyell Company, and the Zeehan institution receives support from the Electrolytic Zinc Company in the shape of a yearly subsidy of £150.

TECHNICAL EDUCATION.—TASMANIA, 1922 TO 1926.

Year.	Number of Classes.	Enrolments.	Average Weekly Attendance.	Number of Teachers.	Fees Received.
					£
1922	209	1,098	(*a*)	55	1,069
1923	254	1,151	(*a*)	72	1,133
1924	(*a*)	1,351	971	83	1,533
1925	254	1,450	978	90	1,412
1926	(*a*)	1,547	1,114	84	1,660

(*a*) No record.

8. Expenditure on Technical Education.—The expenditure on technical education in each State during the period 1922 to 1926 is shown below :—

TECHNICAL EDUCATION.—EXPENDITURE 1922 TO 1926.

Year.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania	Total.
		£	£	£	£	£	£	£
1922	(*a*)	169,925	202,228	59,075	43,744	18,406	18,222	511,600
	(*b*)	48,978	21,750	1,577	708	1,030	151	74,194
1923	(*a*)	146,158	215,320	60,824	46,655	18,189	18,271	505,417
	(*b*)	16,971	45,649	13,379	3,461	1,590	366	81,416
1924	(*a*)	166,844	239,319	62,888	56,140	18,229	20,415	563,835
	(*b*)	7,100	53,572	3,514	5,811	1,003	127	71,127
1925	(*a*)	169,002	255,790	78,720	56,821	18,391	20,353	599,077
	(*b*)	27,504	95,686	4,632	9,760	522	57	138,161
1926	(*a*)	182,714	282,555	89,555	66,397	22,653	20,758	664,632
	(*b*)	59,993	64,448	9,867	15,397	2,264	356	152,325

(*a*) Maintenance. (*b*) Buildings.

The expenditure on maintenance for technical education in 1926 amounted to 2s. 1d. per head of the population of Australia, as compared with 28s. 9d. per head expended on maintenance for primary and secondary education.

§ 7. Business Colleges and Shorthand Schools.

There has been considerable development in recent years both in the number and scope of privately conducted institutions which aim at giving instruction in business methods, shorthand, typewriting, the use of calculating machines, etc. Particulars for all States excepting Queensland are given in the following table :—

BUSINESS COLLEGES, SHORTHAND SCHOOLS, ETC., 1926.

State.	Schools.	Teachers.	Students Enrolled.		Average Attendance.		Fees Received.
			Males.	Females.	Males.	Females.	
							£
New South Wales ..	22	153	2,184	5,783	806	2,990	56,497
Victoria	13	158	4,380	2,765	3,353	2,244	(*b*)
Queensland(*a*) ..	..	..	..	..	..	..	..
South Australia ..	7	47	853	1,551	656	1,287	16,787
Western Australia	11	49	1,377	1,463	(*b*)	(*b*)	25,006
Tasmania ..	3	17	138	586	95	284	4,825

(*a*) Included in private schools. (*b*) Not available.

The figures for New South Wales are exclusive of students instructed at home through the medium of correspondence classes.

In Victoria it is explained that the preponderance of male students is due to the larger enrolment of males in the correspondence classes.

§ 8. Diffusion of Education.

1. General Education.—A rough indication of the state of education of the people is obtained at each Census under the three headings, "read and write," "read only," and "cannot read." The grouping of the whole population, exclusive of aborigines, in these three divisions is given for each Census since 1871. Particulars for each State and Territory were included in previous issues of the Official Year Book (see No. 19, p. 439).

EDUCATION AT CENSUS PERIODS, AUSTRALIA, 1871 TO 1921.

Division.	1871.	1881.	1891.	1901.	1911.	1921.
Read and write ..	1,037,601	1,591,556	2,394,339	3,020,665	3,766,251	4,607,579
Read only	177,596	138,282	108,870	78,614	18,599	14,609
Cannot read	447,842	520,356	671,183	674,522	670,155	813.546

It will of course be understood that the heading "cannot read" includes a large proportion of children under five years of age.

The proportion in Australia of the various classes per 10,000 of the population is shown below for each Census period :—

PROPORTION OF EDUCATED AND ILLITERATE PER 10,000 PERSONS, 1871 TO 1921.

(AUSTRALIA.)

Division.	1871.	1881.	1891.	1901.	1911.	1921.
Read and write ..	6,239	7,073	7,543	8,004	8,454	8,481
Read only	1,068	615	343	208	42	28
Cannot read ..	2,693	2,312	2,114	1,788	1,504	1,491

As pointed out previously, the "cannot read" group includes a large proportion of children under five years of age.

2. **Education of Children.**—The figures in the preceding tables refer to the entire population of Australia, and as the age constitution of those dwelling in the various portions thereof underwent considerable modifications during the period dealt with, a far more reliable test of the diffusion of education will be obtained by a comparison of the Census returns in regard to children of school age. For comparative purposes this has been taken to include all children in the group over five and under fifteen years of age, and the degree of education of these at each Census from 1861 to 1921 for Australia will be found below. Particulars for each State and Territory were given in preceding issues of the Official Year Book.

EDUCATION OF CHILDREN OF SCHOOL AGE AT CENSUS PERIODS, AUSTRALIA, 1861 TO 1921.

Division.	1861.	1871.	1881.	1891.	1901.	1911.	1921.
Read and write ..	107,201	255,374	394.001	549,049	711,004	800,139	977.105
Read only	59,219	89.818	70,662	53,136	42,856	2,614	1,287
Cannot read	58,945	86,961	93,381	121,443	136,712	83,659	146.406

The variation in degree of education may be more readily seen by reducing the foregoing figures to the basis of proportion per 10,000, and the results so obtained are embodied in the following table, a glance at which is sufficient to demonstrate the remarkable strides that at least the lower branches of education have made since 1861. In that year, only 48 per cent. of the children of school age could read and write, while 26 per cent. were illiterate. The returns for 1921 show that the proportion of those who could read and write had increased to over 87 per cent., while the totally illiterate had declined to 13 per cent.

EDUCATION OF CHILDREN (AGES 5 TO 14) PER 10,000 AT CENSUS PERIODS, AUSTRALIA, 1861 TO 1921.

Division.	1861.	1871.	1881.	1891.	1901.	1911.	1921.
Read and write ..	4,757	5,910	7,061	7,588	7,984	9,027	8,687
Read only	2,628	2,078	1,266	734	481	29	11
Cannot read	2,615	2,012	1,673	1,678	1,535	944	1,302

3. Education as shown by Marriage Registers.—Another common method of testing the spread of education is to compare the number of mark signatures in the marriage registers with the total number of persons married during each year of a series. The percentage signing with a mark to the total persons married in the Census year 1921 was only 0.17, as compared with 24.60 in 1861.

§ 9. Miscellaneous.

1. Scientific Societies.—(i) *Royal Societies.* Despite the trials and struggles incidental to the earlier years of the history of Australia, higher education and scientific advancement were not lost sight of. Thus the origin of the Royal Society dates as far back as 1821, when it was founded under the name of the Philosophical Society of Australasia, Sir Thomas Brisbane being its first president. Scientific work was fitfully carried on by means of a Society whose name varied as the years rolled on. It was called the Australian Philosophic Society in 1850. In 1856 the old Australian Society merged into a resuscitated Philosophical Society of New South Wales, and its papers were published up to 1859 in the Sydney Magazine of Science and Art (2 vols., 1858–9). Its present title dates from 1866. Some of the papers of the old Philosophical Society were published in 1825 under the title of "Geographical Memoirs of New South Wales" (Barron Field), and contain much that is interesting in regard to the early history of Australia. One volume containing the Transactions of the Philosophical Society of New South Wales (1862–65) was published in 1866. The journal of the Society did not begin to bear a serial number, however (vol. 1), until the year 1867. "Transactions of the Royal Society of New South Wales" were published in 1867, the title of the series being altered to "Journal" in 1878. Up to the end of 1927, 61 volumes had been published. The exchange list comprises the names of 385 kindred societies. At the present time the library contains over 30,000 volumes and pamphlets, valued at about £9,000. Income and expenditure for the year ended 31st March, 1928, were £1,835 and £1,908 respectively, and the Society had on the same date 346 members.

The Royal Society of Victoria dates from 1854, in which year the Victorian Institute for the Advancement of Science and the Philosophical Society of Victoria were founded. These were amalgamated in the following year under the title of the Philosophical Institute of Victoria, whilst the Society received its present title in 1860. The first volume of its publications dates from 1855. Up to 1926, 71 volumes of proceedings had been issued. The Society exchanges with 300 kindred bodies. The constitution of the Society states that it was founded "for the promotion of art, literature, and science," but for many years past science has monopolized its energies. A mathematical and physical section encourages discussion in these sciences. The library contains over 17,000 volumes, valued approximately at £4,500. Income for the year 1926 amounted to £628, and expenditure to £634. There are 206 members on the roll.

The inaugural meeting of the Royal Society of Queensland was held on the 8th January, 1884, under the presidency of the late Sir A. C. Gregory. The Society was formed "for the furtherance of the natural and applied sciences, especially by means of original research." Shortly after its formation it received an addition to its ranks by the amalgamation with it of the Queensland Philosophical Society, which was started at the time when Queensland became a separate colony. At the end of 1927 the members numbered 179; publications issued, 39 volumes; library, 7,500 volumes; societies on exchange list, 230. Income and expenditure for the year amounted to £285 and £249 respectively.

The Royal Society of South Australia grew out of the Adelaide Philosophical Society, which was founded in 1853, its object being the discussion of all subjects connected with science, literature, and art. Despite this programme, the tendency of the papers was distinctly scientific, or of a practical or industrial nature. With the advent of the late Professor Tate, the Society became purely scientific. Permission to assume the title of "Royal" was obtained in 1879, the Society thenceforward being known as "The Royal Society of South Australia." In 1903 the society was incorporated. In 1927 the number of members was 148. The income for the year 1926–7 was £766, and expenditure £654. Up to 1927 the Society had issued 51 volumes of proceedings and 8 parts of memoirs, exclusive of several individual papers published in earlier years. The exchange list numbers about 220, while the library contains 4,800 volumes and over 1,950 pamphlets. The Field Naturalists section of the Society comprises 179 members, and issues a small quarterly journal called "The South Australian Naturalist."

Permission to assume the title of Royal Society was granted to the Natural History and Science Society of Western Australia in March, 1914. This Society has grown out of the Mueller Botanic Society, founded in July, 1897. The objects of the Society are the study of natural history and pure science, promoted by periodical meetings and field excursions, the maintenance of a library, and issue of reports of proceedings. It numbers at present 232 members. The income and expenditure in 1926–27 were £369 and £334 respectively. Five volumes of proceedings were issued as Journal of the Natural History and Science Society of Western Australia, and twelve as of the Royal Society. Its publications are exchanged with 115 institutions at home and abroad. The library contains some 250 volumes, and over 2,000 unbound journals, pamphlets, etc.

The Royal Society of Tasmania (the first Royal Society outside the United Kingdom) was inaugurated by Sir Eardley Wilmot, Lieutenant-Governor of Van Diemen's Land on the 14th October, 1843. It may be mentioned, however, that a scientific society had been formed as far back as 1838 under the presidency of Sir John Franklin, then Governor of the colony, and in 1841 the number of resident members was 31, and corresponding members, 38. The meetings of this parent society were held at Government House, and three volumes of proceedings were issued. A large portion of the Colonial Gardens, together with a grant of £400, was given to the Society. A library and museum were established in 1848. In 1885 the museum and gardens were given back to the State, the Society being granted room in the museum for its library and meetings. The names of Captains Ross and Crozier, of H.M.S. *Erebus* and *Terror*, appear in the list of the first corresponding members. The Society, which, since 1844, has published 64 annual volumes of proceedings, possesses 262 members, 7 corresponding members, 6 life members, exchanges with 230 kindred bodies, and has a library containing 15,500 volumes, in addition to manuscripts, etc., valued at over £10,000. Income for the year 1927 was £363 and expenditure £362.

(ii) *The Australasian Association for the Advancement of Science.* This Association was founded in 1887, with head-quarters at the Royal Society's House in Sydney. It was recognized that in addition to Royal, Linnean, and Naturalists' Societies generally, there was a decided necessity for an organization representative of scientific education in Australia and New Zealand "to give a stronger impulse and a more systematic direction to scientific inquiry, to promote the intercourse of those who cultivate science in different parts of the Commonwealth of Australia, the Dominion of New Zealand, and in other countries, to obtain more general attention to the objects of science, and a removal of any disadvantages of a public kind which may impede its progress." The Association aims at co-operation between the workers in the various branches of science on the one hand, and between the professional scientist and the general public on the other. Its meetings are usually held biennially within the various States and in the Dominion of New Zealand. The next meeting will be held in Brisbane in May, 1930. Although the actual funds of the Association are small, liberal aid has always been forthcoming from the various State Governments, especially in connexion with the printing of the important volumes of its proceedings, of which Vol. XVII. is the latest issued. The library of the Association contains 4,000 volumes. Not the least important of the activities of the Association was the giving a constitution to the Australian National Research Council, which brought in its train the Pan-Pacific Science Congress of 1923.

(iii) *Other Scientific Societies.* The Linnean Society of New South Wales, with headquarters in Sydney, was founded in 1874. The soundness of its present position is due to the benefactions of Sir William Macleay, who during his lifetime and by his will endowed the Society to the amount of £67,000, which has been increased by judicious investment to over £80,000. Income for the year 1927 amounted to £5,907 and expenses to £4,603, including £1,741 for research purposes. The Society maintains a research bacteriologist, and offers annually 4 research fellowships in various branches of natural history. The library comprises some 14,000 volumes, valued at about £7,000. Fifty volumes of proceedings have been issued, and the Society exchanges with some 200 kindred institutions. The ordinary membership at the end of 1927 was 169.

The British Astronomical Society has a branch in Sydney, and in some of the States the British Medical Association has branches.

In addition to the societies enumerated above, there are various others in each State devoted to branches of scientific investigation.

2. Public Libraries.—In each of the capital cities there is a well-equipped Public Library, the institutions in Melbourne and Sydney especially comparing very favourably with similar institutions elsewhere. The following statement gives the number of volumes in the Public Library of each capital city :—

METROPOLITAN PUBLIC LIBRARIES, 1926.

City.	Number of Volumes in—			Total.
	Reference Branch.	Ordinary Lending Branch.	Country Lending Branch.	
Sydney	(a) 400,662	(b)	45,572	446,234
Melbourne	329,111	45,344	..	374,455
Brisbane	48,795	..	..	48,795
Adelaide	139,178	61,083	..	200,261
Perth	123,344	..	17,121	140,465
Hobart	20,930	9,070	..	30,000

(a) Including 118.810 volumes in the Mitchell Library.

(b) The maintenance and control of the ordinary lending branch of the Public Library at Sydney were transferred in 1908 to the Municipal Council. At the end of December, 1926, the books numbered 45,572.

During 1921 the Public Library authorities in Sydney inaugurated the system of lending boxes of children's books to country schools, and a large number of these children's travelling libraries is now in operation. Boxes are forwarded to out-back schools distant from towns. Each box contains about 40 books, and is lent for a period of four months, and then exchanged for another collection, the Library Trustees defraying the cost of carriage both ways. During the year ended 30th June, 1927, reference books to the number of 32,852 were sent by post on loan to 21,105 borrowers in the country areas.

A special research staff attached to the Public Library gives valuable assistance in making readily available to inquirers the store of information contained in books, etc. which, owing to limitations of space, are not in open access.

The Mitchell Library in Sydney consisted of over 60,000 volumes and pamphlets, and 300 paintings, principally relating to Australasia, valued at £100,000, and bequeathed in 1907 by Mr. D. S. Mitchell, together with an endowment of £70,000. The testator stipulated that the regulations of the British Museum were to be adopted as far as practicable, hence the library is the resort of specialists. There are now about 119,000 volumes in the library in addition to valuable collections of Australian postage and fiscal stamps.

Amongst other important libraries in New South Wales may be mentioned the "Fisher" Library at Sydney University, with 169,000 volumes; the library at the Australian Museum, 25,000; the Teachers' College library, 27,000; Sydney Technical College library, 13,000; and the library at the Botanic Gardens, 9,600. The libraries attached to State schools contain over 455,000 volumes.

The reading room at the Melbourne Public Library ranks among the finest in the world. It was opened in 1913, and has a diameter of 114 feet, with a similar height, and is capable of seating 320 readers at a time, all of whom are under efficient supervision from the centre of the room. During the year 1926, 2,838 volumes were lent to Mechanics' Institutes and Free Libraries, and 1,581 books were sent by post to borrowers in the country.

The library at Brisbane (South) contained about 14,150 volumes at the end of June, 1926.

For some years past efforts have been made in South Australia to collect original documents likely to be of service in compiling a history of the State. So far back as 1914, Professor Henderson, of Adelaide University, under commission from the South Australian Government, visited and reported on the system of keeping archives in England, France, Belgium, Holland, and Ceylon, and obtained valuable information also from the United States and Canada. A department of historical documents has been created under the care of an archivist, and valuable work has been done in connexion with examination, classification, and permanent preservation of the available papers. A suitable building for housing the documents and the staff was provided in 1921. At the 30th June, 1927, the collection numbered 260,000 documents, 1,156 views, and 793 maps.

During 1922 the Tasmanian Public Library adopted the plan of lending books to individual country borrowers and to families or committees of residents in country districts. The Public Library at Launceston contains 33,000 volumes.

Mention may be made here of the free library attached to the Commonwealth Patents Office, which contains over 10,000 volumes, including literature dealing with patents in the principal countries of the world.

Statistics in regard to libraries generally are not available for all States, while the information supplied is not in all cases complete. Returns for Victoria in 1926 showed a total of 502 libraries in receipt of State or municipal aid, containing 1,313,000 books; Queensland returned 259 libraries, with 544,000 books; South Australia, 248 libraries and 776,000 books; while there were 3 libraries, with 5,500 books, in the Northern Territory.

3. **Public Museums.**—The Australian Museum in Sydney, founded in 1836, is the oldest institution of its kind in Australia. In addition to possessing fine collections of the usual objects to be met with in kindred institutions, the Museum contains a very valuable and complete set of specimens of Australian fauna. The cost of construction of the building was £79,000. The number of visitors to the institution in 1926 was 280,000, and the average attendance on week-days 668, and on Sundays 1,393. The expenditure for 1926 amounted to £21,000. A valuable library containing about 25,000 volumes is attached to the Museum. Courses of evening popular lectures are delivered, and lecturers also visit distant suburbs and country districts, while afternoon lectures for school children are provided. Nature talks are also broadcast by wireless. Representative collections illustrative of the natural wealth of the country are to be found in the Agricultural and Forestry Museum, and the Mining and Geological Museum. The latter institution prepares collections of specimens to be used as teaching aids in country schools. The "Nicholson" Museum of Antiquities, the "Macleay" Museum of Natural History, and the Museum of Normal and Morbid Anatomy, connected with the University, and the National Herbarium and Botanical Museum at the Sydney Botanic Gardens, are all accessible to the public. There is a fine Technological Museum in Sydney, with branches in five country centres. Valuable research work is being performed by the scientific staff in connexion with oil and other products of the eucalyptus, and the gums, kinos, tanning materials, and other economic products of native vegetation generally. During 1922 the work of the Museum was strengthened by the appointment of an advisory committee representing the scientific, general, and industrial activities of the State.

The National Museum at Melbourne, devoted to Natural History, Geology, and Ethnology, is located in the Public Library Building. The National Art Gallery is situated in the same building. The Industrial and Technological Museum, also housed under the same roof, contains about 10,000 exhibits. Cost of construction for the combined institutions is set down at £327,000. There is a fine Museum of Botany and Plant

Products in the Melbourne Botanic Gardens. In addition to the large collection in the geological museum attached to the Mines Department in Melbourne, well-equipped museums of mining and geological specimens are established in connexion with the Schools of Mines in the chief mining districts.

The Queensland Museum dates from the year 1871, but the present building was opened in January, 1901. Since its inauguration the Government has expended on the institution a sum of £121,773, of which buildings absorbed £21,321, purchases £33,477, and salaries £66,975. The number of visitors during 1926 was 156,000, of whom 47,000 visited the institution on Sundays. The Queensland Geological Survey Museum has branches in Townsville, opened in 1886, and in Brisbane, opened in 1892.

Under the Public Library Act of 1884 the South Australian Institute ceased to exist, and the books contained therein were divided amongst the Museum, Public Library, and Art Gallery of South Australia, and the Adelaide Circulating Library. The Museum was attended by 99,000 visitors in 1926. Cost of construction of the Museum building was returned as £65,000.

The latest available returns show that the Western Australian Museum and Art Gallery contains altogether 103,500 specimens, of an estimated value of £82,000. The Museum, Art Gallery, and Library are housed in one building, and the visitors to the combined institutions during the year reached 82,000. At the 30th June, 1927, the structure was valued at £65,000.

There are two museums in Tasmania—the Tasmanian Museum at Hobart, and the Victoria Museum and Art Gallery at Launceston—both of which contain valuable collections of botanical, mineral, and miscellaneous products. The Museums received aid from the Government during 1925–26 to the extent of £1,725. The cost of construction in each case is included in that of Art Galleries given below.

4. **Public Art Galleries.**—The National Art Gallery of New South Wales originated in the Academy of Art founded in 1871. Cost of construction of the present building amounted to about £94,000. At the end of 1925 its contents, which are valued at £172,000, comprised 546 oil paintings, 427 water colours, 842 black and white, 181 statuary and bronzes, and 817 ceramics, works in metal and miscellaneous. During 1925 the average attendance on week days was 450, and on Sundays 1,500. Since the year 1895 loan collections of pictures have been regularly forwarded for exhibition in important country towns.

The National Gallery at Melbourne at the end of 1926 contained 725 oil paintings, 5,497 objects of statuary, bronzes, ceramics, etc., and 15,770 water colour drawings, engravings, and photographs. The Gallery is situated in the same building as the Museum and Public Library, the total cost of construction being £327,000. Several munificent bequests have been made to the institution. That of Mr. Alfred Felton, given in 1904, amounts to about £8,000 per annum. In 1913, Mr. John Connell presented his collection of art furniture, silver, pictures, etc., the whole being valued at £10,000. The Art Gallery at Ballarat contains over 400 oil paintings and water colours, with some fine statuary, bronzes, etc., while there are some valuable works of art in the small galleries at Bendigo, Castlemaine, Geelong, and Warrnambool, and in some cases pictures are sent on loan from the National Gallery.

The Queensland National Art Gallery, situated in the Executive Buildings, Brisbane, was founded in 1895, and contains a small, but well chosen collection of pictures. At the end of 1926 there were on view 109 oil paintings, 28 water colours, 208 black and white, and 33 pieces of statuary, together with various prints, mosaics, and miniatures. Exclusive of exhibits on loan, the contents are valued at about £12,000. Visitors during the year averaged 144 on Sundays and 123 on week days.

The Art Gallery at Adelaide dates from 1880, when the Government expended £2,000 in the purchase of pictures, which were exhibited in the Public Library Building in 1882. The liberality of private citizens caused the gallery rapidly to outgrow the accommodation provided for it in 1889 at the Exhibition Building, and on the receipt of a bequest of £25,000 from the late Sir T. Elder, the Government erected the present building, which was opened in April, 1900. The Gallery also received bequests of £16,500 in 1903 from the estate of Dr. Morgan Thomas, and of £3,000 in 1907 from Mr. David Murray. At the 30th June, 1927, there were in the Gallery 718 paintings in oil and water colour, 281 drawings and black and white, 251 statuary, furniture, and art work, 6,452 prints, and 1,479 ceramics and miscellaneous. Building and site are valued at upwards of £31,000. Visitors during the year 1927 numbered 86,000. The cost of construction of the Art Gallery amounted to £22,000.

The foundation stone of the present Art Gallery at Perth in Western Australia was laid in 1901, and, as in the case of Melbourne, the Public Library, Museum, and Art Gallery are all situated in the one structure. The collection comprises 132 oil paintings, 57 water colours, 500 black and white, 276 statuary, and 2,920 ceramic and other art objects. Cost of construction of the buildings amounted to £12,000.

In Tasmania, the Art Gallery at Hobart was opened in 1887. Its present contents consist of 131 oil paintings, 134 water colours, 23 black and white, 4 statuary, and 181 etchings, engravings, etc. The cost of construction of the building was £4,500.

The Art Gallery at Launceston was erected in 1888 at a cost of £6,000, and opened on the 2nd April, 1891. Only a small proportion of the contents belongs to the gallery, the bulk of the pictures being obtained on loan. At latest date there were on view 104 oil paintings and 68 water colours and miscellaneous exhibits.

5. State Expenditure on all Forms of Educational Effort.—The expenditure from the Consolidated Revenue in each State and Territory on all forms of educational and scientific activity during each of the last five financial years was as follows :—

EXPENDITURE ON EDUCATION, SCIENCE, AND ART, 1922–23 TO 1926–27.

State or Territory.		1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
New South Wales ..	Total £	3,777.551	3,779,896	3,987,709	3,994,722	4,165,590
	Per head	34/9	34/2	35/4	34/8	35/5
Victoria	Total £	2,048.949	2,166,763	2,259.529	2,392,948	2.594.867
	Per head	25/9	26/8	27/3	28/5	30/4
Queensland ..	Total £	1,349,387	1,410,089	1,510,944	1,596,474	1,613,155
	Per head	34/3	34/9	36/2	37/1	36/7
South Australia ..	Total £	623 902	709.728	764.914	876,620	960.374
	Per head	24/4	27/0	28/5	31/9	33/11
Western Australia ..	Total £	604,947	621,168	628,755	644,459	697,379
	Per head	35/3	35/1	34/6	34/8	36/10
Tasmania	Total £	281.602	271,321	286,334	297.406	306,106
	Per head	25/9	24/9	26/3	27/5	28/6
Northern Territory	Total £	4,884	4,515	4,858	7,937	6.051
	Per head	27/6	25/5	27/0	43/5	31/0
Australia ..	Total £	8,691,222	8,963,480	9,443,043	9,810.566	10,343.522
	Per head	30/10	31/2	32/2	32/9	33/10

The comparatively heavy increases during the last five years are partly due to the expanding provision for State aided education, to greater cost of building, equipment, and maintenance, and to increments in teachers' salaries and allowances.

CHAPTER X.

PUBLIC JUSTICE.

§ 1. Police.

1. **General.**—In early issues of the Year Book a résumé was given of the evolution of the police force in Australia up to the passing of the Police Act of 1862 (25 Vic. No. 16) in New South Wales, but considerations of space preclude its inclusion in the present volume.

2. **Strength of Police Force.**—(i) *General.* The strength of the police force in each State during the five years ended 1926 is given in the table hereunder. It may be mentioned that the police forces are entirely under State control, but, by arrangement, the Commonwealth Government utilizes their services in various directions, such as the collection of particulars for Commonwealth electoral rolls, etc.

POLICE FORCES.—STRENGTH, 1922 TO 1926.

State.	Area of State in Sq. Miles.	1922.	1923.	1924.	1925.	1926.
New South Wales ..	310,372	2,799	2,825	2,890	2,937	2,970
Victoria	87,884	1,741	1,251	1,810	1,875	1,963
Queensland ..	670,500	1,113	1,114	1,127	1,182	1,167
South Australia ..	380,070	576	599	616	632	642
Western Australia	975,920	489	502	523	532	537
Tasmania ..	26,215	240	240	241	240	245
Northern Territory	523,620	32	32	32	38	38
Total ..	2,974,581	6,990	6,563	7,239	7,436	7,562

The figures for New South Wales for 1926 are exclusive of 31 "black trackers," i.e., natives employed in detection of offenders chiefly in outlying districts, and 4 female searchers. For Queensland the figures exclude 61 native trackers and 1 female searcher; for South Australia 10 "black trackers" and 1 female searcher, and for the Northern Territory 33 "black trackers." There are also 44 "black trackers" and 5 female searchers in Western Australia, not included in the table. According to the returns, women police are employed in all the States except Queensland, the respective numbers being—New South Wales 4, Victoria 4, South Australia 10, Western Australia 5, and Tasmania 1. Their work is mainly preventive, and the importance and usefulness of their duties have been referred to in very high terms by the Commissioners of Police.

The strength of the force in Victoria for the year 1923 was below normal, owing to dismissals consequent on the dispute which occurred in November of that year.

(ii) *Proportion to Population.* The average number of inhabitants to each officer in each State during the same period is as follows. In considering these figures, allowance must, of course, be made for the unequal area and unequal distribution of the population of the various States.

POLICE FORCES.—COMPARISON WITH POPULATION, 1922 TO 1926.

State.	Number of Persons per Sq. Mile, 1921 Census.	Inhabitants to each Police Officer.				
		1922.	1923.	1924.	1925.	1926.
New South Wales	6.80	769	777	772	776	783
Victoria	17.42	902	1,285	907	891	864
Queensland	1.13	702	720	732	720	750
South Australia	1.30	879	864	860	861	871
Western Australia	0.34	695	694	687	691	698
Tasmania	8.15	895	897	891	889	862
Northern Territory	..	114	113	113	97	99
Total	1.83	797	867	802	798	800

As explained previously the figures for Victoria for the year 1923 are abnormal, but, with the exception of that year, the rate of protection maintained for Australia as a whole has remained fairly constant.

3. Duties of the Police.—In addition to the ordinary employment attaching to their office, the police are called upon to perform many duties which in other countries are carried out by various functionaries. Thus, in New South Wales, according to the Report of the Inspector-General, the time of one-fifth of the force was taken up during 1921 in extraneous duties unconnected with the protection of life and property, while the cash value of the services rendered to other Government departments was stated as over £200,000 per annum. The Queensland Commissioner refers to the circumstance that in 1926 no less than 70 subsidiary offices were held by the police. In South Australia, the Commissioner alludes to the large number of subsidiary duties performed by police officers, and mentions that in 1926 over 140,000 hours were devoted to carrying out work on behalf of other departments.

While these special tasks doubtless involve some degree of sacrifice of ordinary routine duties, the fact that the general intelligence of the police is adequate for their performance, besides being most creditable, results in a large saving of the public money.

4. Cost of Police Forces.—The expenditure from Consolidated Revenue on the police forces, and the cost per head of population in each State during the five years 1922 to 1926, are given in the following table :—

POLICE FORCES.—COST, 1922 TO 1926.

State.	1922.	1923.	1924.	1925.	1926.
			TOTAL.		
	£	£	£	£	£
New South Wales ..	1,205,557	1,219,244	1,317,320	1,331,978	1,370,659
Victoria	600,856	755,698	741,126	768,939	840,653
Queensland	455,519	461,446	497,484	554,879	563,391
South Australia	216,109	221,635	246,646	250,915	263,857
Western Australia ..	181,893	185,945	193,461	216,798	224,690
Tasmania	77,096	78,313	81,318	84,340	88,725
Northern Territory ..	16,011	16,070	17,923	19,004	19,656
Total	2,753,041	2,938,351	3,095,278	3,226,853	3,371,631
			PER HEAD OF POPULATION.		
	s. *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*
New South Wales ..	11 1	11 0	11 8	11 7	11 9
Victoria	7 7	9 4	8 11	9 2	9 11
Queensland	11 7	11 5	11 11	12 11	12 11
South Australia	8 5	8 5	9 2	9 1	9 5
Western Australia ..	10 7	10 6	10 7	11 8	12 0
Tasmania	7 0	7 2	7 6	7 9	8 5
Northern Territory ..	90 2	90 5	99 7	104 0	104 5
Total	9 9	10 3	10 6	10 9	11 2

In view of the small number of its white population and the vast extent of country to be patrolled, the figures for the Northern Territory necessarily show a very high average. The duties of the police, moreover, chiefly pertain to matters connected with the control of aborigines.

The total for New South Wales in 1926 includes £170,600 payment to the Police Superannuation Fund. Similar payments in Victoria and Queensland amount to £122,000 and £46,200 respectively. It may be noted that the high cost and cost per head in Victoria shown for the year 1923, as compared with the previous year, are accounted for by expenditure in connexion with the police dispute in 1923.

The general advance in cost during the period under review is due to increases in salaries, and rise in prices of supplies and equipment.

5. **Interstate Police Conferences.**—In February, 1921, a Conference of the chief officers of the police forces of the various States was held in Melbourne. In addition to the discussion of matters of common interest, arrangements were made for the interchange of detectives. The results were so satisfactory that it was decided to hold similar Conferences annually. In 1926 the Conference met in Sydney, and the next was held at Hobart in January, 1927.

§ 2. Lower (Magistrates') Courts.

1. **General.**—In considering the criminal returns of the various States, due allowance must be made on account of several factors, such as the relative powers of the courts, both lower and higher, etc. In the case of lower courts, the actual number of laws in each State the breach of which renders a person liable to fine or imprisonment must be taken into account. Again, the attitude of the magistracy and police towards certain classes of offences is a factor, for in the case of liquor laws, or laws connected with vagrancy or gaming, the views of magistrates, and instructions issued to the police, may be responsible for considerable variations in the returns. The strength and distribution of the police forces, and the age-constitution and distribution of the States' population, also influence the results. Due weight should also be given to the prevalence of undetected crime, but information on this point is not available for all States. It may be mentioned that each State has its own separate judicial system, the Commonwealth jurisdiction being confined to the High Court of Australia, which is largely a Court of Appeal intermediate to the Privy Council, although it has also original jurisdiction, and the Commonwealth Court of Arbitration and Conciliation. Full particulars regarding the judicial power of the Commonwealth will be found in Chapter III. of the Commonwealth Constitution, which is quoted in full in Chapter I. of this work.

2. **Powers of the Magistrates.**—In New South Wales there is no general limit to the powers of the magistrates in regard to offences punished summarily, their authority depending in each case on the statute which creates the offence and gives them jurisdiction. Except in the case of a very few statutes, and excluding cumulative sentences, the power of sentence is limited to six months. Imprisonment in default of payment of fine is regulated by a scale limiting the maximum period according to the sum ordered to be paid, but in no case exceeding twelve months. Actions for debt and damage within certain limits also come within magisterial jurisdiction. In cases of debts, liquidated or unliquidated, the amount recoverable is not exceeding £50 before a court constituted of a stipendiary or police magistrate at certain authorized places, and not exceeding £30 at any other place before a court constituted of a stipendiary or police magistrate or two or more justices of the peace. The amount in actions of damage is limited to £10, but may extend to £30 by consent of parties.

In Victoria, the civil jurisdiction of magistrates is restricted to what may be designated ordinary debts, damages for assault, restitution of goods, etc., where the amount in dispute does not exceed £50. No definite limit is fixed to the powers of the magistrates on the criminal side, and for some offences sentences up to two years may be imposed. The proportion of long sentences is, however, comparatively small.

In Queensland, generally speaking, the maximum term of imprisonment which justices can inflict is six months, but in certain exceptional cases, such as offences against sections 233 and 445 of the Criminal Code (betting-houses and illegally using animals) sentences of twelve months may be imposed. No limit exists as to the extent to which cumulative sentences may be applied, but in practice the term is never very lengthy.

In South Australia, under the Minor Offences Act, magistrates can impose sentences up to six months, and under the Summary Convictions Act, up to three months. The Police Act of 1916 gives power to sentence up to one year, with hard labour, in the case of incorrigible rogues; while under the Quarantine Act of 1877, and the Lottery and Gaming Act of 1875, sentences of two years may be imposed.

Under the Petty Offences Act of 1867, in Tasmania, any person charged with having committed, or with having aided or abetted in the commission of an offence in regard to property of a value not exceeding £10, may, on conviction for a first offence before two or more justices in Petty Sessions, be imprisoned for any term not exceeding one year, and for a term not exceeding two years for a second or subsequent offence.

3. **Persons Charged at Magistrates' Courts.**—The total number of persons who were charged before magistrates in each State is given below for the five years 1922 to 1926:—

MAGISTRATES' COURTS.—PERSONS CHARGED, 1922 TO 1926.

State.	1922.	1923.	1924.	1925.	1926.
New South Wales ..	96,989	104,519	98,101	102,377	116,675
Victoria.. ..	63,713	67,112	68,494	73,346	75,556
Queensland	25,185	25,956	24,017	28,684	29,196
South Australia	11,821	14,321	15,812	20,651	23,637
Western Australia ..	10,844	10,182	10,679	11,358	12,335
Tasmania	7,106	8,479	8,001	7,035	7,848
Northern Territory ..	186	154	204	180	142
Total	215,844	230,723	225,308	243,631	265,389

Investigation of the returns shows that considerable variations in the figures for single States are occasioned by breaches of new Acts, or the more stringent enforcement of the provisions of existing Acts. Any deductions drawn from the total returns as to the increase or otherwise of criminality must, therefore, be largely influenced by a careful analysis of the detailed list of offences. Thus, the considerable increase in the total offences in New South Wales for the year 1926 was due chiefly to the large number of charges under the Traffic Act, the total recorded in 1926 being 20,594 as compared with 11,895 in 1925.

4. **Convictions and Committals.**—The figures given in the tabulation above include, of course, a number of people who were wrongly charged, and statistically are not of general importance. The actual number of convictions in connexion with the persons who appeared before the lower courts in each year of the period 1922 to 1926 is, therefore, given hereunder. A separate line is added showing the committals to higher courts.

MAGISTRATES' COURTS.—CONVICTIONS AND COMMITTALS, 1922 TO 1926.

State.		1922.	1923.	1924.	1925.	1926.
New South Wales ..	Convictions	82,263	88,864	83,019	85,970	100,644
	Committals	2,495	2,654	2,327	1,806	1,832
Victoria	Convictions	49,464	53,183	54,376	58,879	60,728
	Committals	733	634	602	744	761
Queensland ..	Convictions	22,982	23,072	21,476	26,148	26,815
	Committals	331	341	233	326	328
South Australia ..	Convictions	10,048	12,647	13,790	18,556	21,417
	Committals	146	193	176	181	299
Western Australia ..	Convictions	9,748	8,985	9,534	10,047	11,105
	Committals	68	92	92	91	87
Tasmania	Convictions	6,385	7,601	7,271	6,415	7,200
	Committals	79	78	59	95	99
Northern Territory	Convictions	171	117	145	121	129
	Committals	4	3	5	..	2
Total ..	Convictions	181,061	194,469	189,611	206,136	228,038
	Committals	3,856	3,995	3,494	3,243	3,408

5. Convictions for Serious Crime.—While the figures given in the preceding table refer to the entire body of convictions, the fact must not be overlooked that they include a large proportion of offences of a technical nature, many of them unwittingly committed, against various Acts of Parliament. Cases of drunkenness and minor breaches of good order, which, if they can be said to come within the category of crime at all, at least do so in a very different sense from some other offences, also help to swell the list. The following table has therefore been prepared for the purpose of showing the convictions at magistrates' courts for what may be regarded as the more serious offences, i.e., against the person and property, either separately or conjointly, and forgery and offences against the currency :—

MAGISTRATES' COURTS.—CONVICTIONS FOR SERIOUS CRIME, 1922 TO 1926.

State.	1922.	1923.	1924.	1925.	1926.
TOTAL.					
New South Wales ..	7,744	7,543	7,210	7,543	9,340
Victoria..	2,909	3,188	2,815	3,044	3,249
Queensland	1,835	2,021	1,881	2,274	2,608
South Australia	653	883	724	864	872
Western Australia ..	977	930	941	1,108	1,177
Tasmania	577	637	549	550	607
Northern Territory ..	60	17	25	5	22
Total	14,755	15,219	14,145	15,388	17,875
PER 10,000 OF THE POPULATION.					
New South Wales ..	36.0	34.4	32.3	33.1	41.8
Victoria..	18.5	19.8	17.1	18.2	19.1
Queensland	23.5	25.2	22.8	26.7	29.8
South Australia	12.9	17.1	13.7	15.9	15.6
Western Australia ..	28.8	26.7	26.2	30.1	31.4
Tasmania	26.9	29.6	25.6	25.8	28.7
Northern Territory ..	164.2	47.1	69.4	13.6	58.4
Total	26.5	26.8	24.4	25.9	29.6

6. Decrease in Serious Crime, 1881 to 1926.—(i) *Rate of Convictions.* The figures quoted in the preceding table show that during the last five years the rate of serious crime has increased, but if the comparison be carried back to 1881 the position is seen to be more satisfactory. The rate of convictions at magistrates' courts per 10,000 of the population is given below for each of the years 1881, 1891, 1901, 1921, and 1926. Only the more serious offences particularized in the preceding sub-section have been taken into consideration.

MAGISTRATES' COURTS.—SERIOUS CRIME.—RATE OF CONVICTIONS. 1881 TO 1926.

Year.	Convictions per 10,000 Persons.
1881	69.3
1891	44.8
1901	29.1
1921	29.2
1926	29.6

The figures already quoted refer to total convictions, and in respect of individuals necessarily involve a considerable amount of duplication, especially as regards the less important offences, such as petty larcenies, etc.

(ii) *Causes of Decrease.* The statistics given above show that there has been a considerable decrease in crime throughout Australia during the period dealt with. The results so far quoted are restricted entirely to the lower or magistrates' courts. There has also been a gratifying decrease in regard to offences tried at the higher courts, as will be seen later.

Attempts have been made to account for this decline : e.g., advance in education, enlightened penological methods, etc. Much depends upon what is meant by education. Many classed in census statistics as "educated" can barely read and write. In this connexion, moreover, it ought not to be forgotten that collaterally with the introduction of ordinary intellectual education certain people have departed from their pristine virtues. In regard to the deterrent effect of punishment, it may be said that in respect of many offences, notably drunkenness, vagrancy, petty larcenies, etc., it appears to be almost negligible. In general, punishment has declined in brutality and severity, and has improved in respect of being based to a greater extent upon a scientific penological system, though in this latter respect there is yet much to be desired. Recent advances in penological methods will be referred to in a subsequent sub-section. Here it will be sufficient to remark that under the old régime, a prisoner on completion of a sentence in gaol was simply turned adrift on society, and in many cases sought his criminal friends, and speedily qualified for readmission to the penitentiary. Frequently, he was goaded to this by mistaken zeal on the part of the police, who took pains to inform employers of the fact of a man having served a sentence in gaol. For a long time any assistance to discharged prisoners was in the hands of private organizations, such as the Salvation Army Prison Gate Brigade, but in some of the States, and notably in New South Wales, the authorities themselves look after the welfare of discharged prisoners in the way of finding work, providing tools, etc. Improvements in the means of communication and identification have been responsible for some of the falling-off noticeable in the criminal returns, the introduction of the Bertillon system having contributed to certainty of identification. In his report for the year 1910 the Inspector-General of Police in New South Wales stated that "criminals have a wholesome dread of the finger-print system, and I have not the slightest doubt that it is one of the principal causes of the diminution of serious crimes." Part of the improvement may no doubt be referred also to the general amelioration in social conditions that has taken place in modern years.

7. **Drunkenness.**—(i) *Cases and Convictions.* The number of cases of drunkenness and the convictions recorded in connexion therewith during the period 1922 to 1926 will be found in the following table :—

DRUNKENNESS.—CASES AND CONVICTIONS, 1922 TO 1926.

State.	1922.		1923.		1924.		1925.		1926.	
	Cases.	Convictions.	Cases.	Convictions.	Cases.	Convictions.	Cases.	Convictions.	Cases.	Convictions.
New South Wales	30,918	30,723	33,118	32,938	31,468	31,260	30,669	30,160	31,922	31,361
Victoria	8,773	5,204	10,131	6,207	9,814	6,033	9,430	5,767	10,150	6,461
Queensland ..	13,014	12,632	12,376	11,832	11,458	11,005	13,020	12,475	12,713	12,650
South Australia ..	3,775	3,764	4,512	4,496	4,972	4,961	5,830	5,795	6,050	6,029
Western Australia	3,740	3,715	3,198	3,165	3,259	3,231	3,149	3,131	3,318	3,299
Tasmania ..	539	535	506	501	473	464	364	361	333	330
Northern Territory	112	104	37	37	43	39	44	44	68	68
Total ..	60,871	56,677	63,878	59,176	61,487	56,993	62,506	57,733	64,554	60,198

The number of convictions is, as might naturally be expected, almost identical with the number of cases. Victoria, however, is an exception, but in this State it is explained that offenders are generally discharged on a first appearance, and no conviction is recorded, a similar procedure being also adopted in the case of those arrested on Saturday and detained in custody till Monday. The logic of excluding these cases from the list of convictions is open to doubt.

(ii) *Convictions per 10,000 of Population.* The convictions for drunkenness per 10,000 of the population during each of the years from 1922 to 1926 are given hereunder :—

DRUNKENNESS.—CONVICTIONS PER 10,000 INHABITANTS, 1922 TO 1926.

State.	1922.	1923.	1924.	1925.	1926.
New South Wales	142.7	148.9	140.0	132.3	134.8
Victoria	33.1	38.2	36.7	34.5	38.1
Queensland	161.7	145.9	133.4	146.5	144.5
South Australia	74.4	85.7	93.7	106.5	107.9
Western Australia	109.4	89.5	99.3	85.0	88.0
Tasmania	24.9	22.9	21.6	16.9	15.6
Northern Territory	284.7	104.1	108.2	119.5	180.6
Total	101.8	102.9	98.7	97.3	99.5

The convictions for drunkenness taken by themselves are not an altogether satisfactory test of the relative sobriety of the inhabitants of each State, inasmuch as several important factors must be taken into consideration. The age and sex constitution of the people, for example, is by no means identical in all the States. (Owing to the smallness of the population the figures for the Northern Territory are, of course, abnormal.) The avocations of the people affect the result, since persons engaged in strenuous callings are, on the whole, more likely to indulge in alcoholic stimulants than those employed in less arduous ones. The distribution of the population is also a factor, the likelihood of arrest or summons for drunkenness obviously being greater in the more densely populated regions, while allowance must be made for the attitude of the magistracy, the police, and the public generally in regard to the offence. Due account also must be taken of the effect of legislation dealing with the limitation of hours during which liquor may be sold in hotels.

(iii) *Consumption of Intoxicants.* It is not unusual to supplement statistics of drunkenness by furnishing also the relative consumption of alcoholic beverages. Deductions drawn therefrom will be very misleading if they fail to take into account also the consumption of non-intoxicating beverages such as tea and coffee, and the general habits of the people. Throughout the greater part of Europe, tea and coffee are consumed but sparingly, while Australia, as is well known, is one of the greatest tea-drinking countries of the world.

The following table shows the consumption of spirits, wine, and beer per head of the population in Australia during each year of the quinquennium 1923–27 :—

INTOXICANTS, CONSUMPTION.—AUSTRALIA, 1923 TO 1927.

Year.	Consumption per Head of Population.		
	Spirits.	Wine.	Beer.
	Imp. Galls.	Imp. Galls.	Imp. Galls.
1922–23	0.39	0.50	11.30
1923–24	0.43	0.50	11.08
1924–25	0.43	0.50	11.15
1925–26	0.44	0.50	11.34
1926–27	0.41	0.50	11.56

The figures in regard to wine are approximate, and are probably to some extent understated, as it is impossible to ascertain the exact quantity of the production which goes into consumption in the form of wine.

(iv) *Treatment of Drunkenness.* (*a*) *General.* Though the problem of the correct method of dealing with dipsomania is by no means an easy one, it seems fairly clear that the present plan of bringing offenders before magistrates, and subjecting them to the penalty of imprisonment or fine, has little deterrent effect, as the same offenders are constantly reappearing before the courts. Further, the casting of an inebriate into prison, and placing him in his weakened state in the company of professional malefactors, certainly lowers his self-respect, and doubtless tends to swell the ranks of criminals. Examination of the prison records in New South Wales some years ago disclosed the fact that over 40 per cent. of the gaol population had commenced their criminal career with a charge of drunkenness. During the last few years the dangers of moral contamination in this way have been more accurately appreciated, and a system of classification of prisoners has been adopted whereby the petty offender is as far as possible kept from association with the more evilly-disposed. The Comptroller-General of Prisons in Queensland stated in his Report for the year 1907 that "the drunken habit in many cases is merely one of the many symptoms which jointly indicate the existence of a graver condition than simple habitual drunkenness."

(*b*) *Remedial.* Legislation has been passed in each State, providing for the commitment of inebriates to special Government institutions. The laws in the various States are as follows:—New South Wales, Inebriates Act 1912; Victoria, Inebriates Act 1915 and 1923; Queensland, Inebriate Institutions Act 1896; South Australia, Inebriates Acts 1908, 1913, and 1920; Western Australia, Inebriates Acts 1912 and 1919; Tasmania, Inebriates Acts 1885, Inebriate Hospitals Act 1892. Curative work was first undertaken by the Government of New South Wales in 1907. In most cases the institutes are connected with the gaols, and, naturally, custodial measures are still a strong feature in their management; nevertheless, the results of remedial measures have been encouraging.

8. **First Offenders.**—In all the States statutes dealing with first offenders have been in force for some years, the dates of passing the Acts being as follows:—New South Wales, 1894; Victoria, 1890, 1908, and 1915 (Crimes Act, sec. 340); Queensland, 1887; South Australia, 1887, 1913, 1924 and 1925; Western Australia, 1892; Tasmania, 1886. The method of procedure is practically the same in all cases, *i.e.*, with regard to most first offenders the magistrate or judge is empowered to allow the offender to go free on recognizances being entered into for his good behaviour for a certain period. In practice, this humane law has been found to work excellently, very few of those to whom its provisions have been extended having been found to relapse into crime.

9. **Children's Courts.**—Special courts for the trial of juvenile offenders have been established in New South Wales, Victoria, Western Australia, Tasmania, and New Zealand within the last few years, while Children's Courts, although not under that name, are practically provided for by the State Children's Acts of 1895 and 1900 in South Australia. The object of these Courts is to avoid, as far as possible, the unpleasant surroundings of the ordinary police court.

10. **Committals to Superior Courts.**—(i) *General.* In a previous sub-section it has been pointed out that comparisons of criminality based on a consideration of the total returns from magistrates' courts are somewhat inadequate, seeing that the figures include numbers of cases which are merely technical breaches of laws having in some instances a purely local significance. The committals to higher courts give a better basis of comparison, although even in this connexion allowance must be made for the want of uniformity in jurisdiction. The table below gives the number of committals in each year from 1922 to 1926, with the rate of such committals per 10,000 of the population.

COMMITTALS TO SUPERIOR COURTS, 1922 TO 1926.

State.		1922.	1923.	1924.	1925.	1926.
New South Wales ..	No.	2,495	2,654	2,327	1,806	1,832
	Rate	11.6	12.1	10.4	7.9	7.9
Victoria	No.	733	634	602	744	761
	Rate	4.7	3.9	3.7	4.5	4.5
Queensland	No.	331	341	233	326	328
	Rate	4.2	4.2	2.8	3.8	3.7
South Australia ..	No.	146	193	176	181	299
	Rate	2.9	3.7	3.3	3.3	5.4
Western Australia ..	No.	68	92	92	91	87
	Rate	2.0	2.6	2.6	2.5	2.3
Tasmania	No.	79	78	59	95	99
	Rate	3.7	3.6	2.7	4.4	4.7
Northern Territory ..	No.	4	3	5	..	2
	Rate	10.9	8.3	13.9	..	5.3
Total	No.	3,856	3,995	3,494	3,243	3,408
	Rate	6.9	7.0	6.0	5.5	5.6

(ii) *Decrease in Rate since 1861.* The figures in the preceding table show that the rate of committals for serious crime has decreased by about 19 per cent. during the last five years, but if the comparison be carried further back, it will be found that there has been a very considerable improvement. This will be evident from an examination of the following figures, which show the rate of committals per 10,000 persons in Australia at various periods since 1861 :—

RATE OF COMMITTALS, AUSTRALIA, 1861 TO 1926.

Year	1861.	1871.	1881.	1891.	1901.	1911.	1921.	1926.
Committals per 10,000 inhabitants	22	14	12	11	8	6	7	6

The decline in proportion to population since 1861 has therefore been about 73 per cent.

§ 3. Superior Courts.

1. Convictions at Superior Courts.—The number of convictions at superior courts with the rate per 10,000 of the population is given below for each of the years 1922 to 1926 :—

SUPERIOR COURTS.—CONVICTIONS, 1922 TO 1926.

State.		1922.	1923.	1924.	1925.	1926.
New South Wales ..	No.	1,040	1,059	1,002	(a)1,060	(b)744
	Rate	4.8	4.8	4.5	(c)3.1	3.2
Victoria	No.	463	400	401	510	461
	Rate	2.9	2.5	2.4	3.1	2.7
Queensland	No.	378	278	222	234	269
	Rate	4.8	3.5	2.7	2.7	3.1
South Australia ..	No.	113	120	104	123	174
	Rate	2.2	2.3	2.0	2.3	3.1
Western Australia ..	No.	40	80	64	67	64
	Rate	1.2	2.3	1.8	1.8	1.7
Tasmania	No.	55	56	53	66	69
	Rate	2.6	2.6	2.5	3.1	3.3
Northern Territory ..	No.	3	2	1	2	..
	Rate	8.2	5.5	2.8	5.4	..
Total	No.	2,092	1,995	1,847	2,062	1,781
	Rate	3.8	3.5	3.2	2.7	2.9

(a) Eighteen months ended 30th June, 1926. (b) Year ended 30th June, 1927
(c) Equivalent annual rate.

The rate in 1901 was 4.6 per 10,000, and the decrease to the end of 1926 was, therefore, about 37 per cent.

In considering the above figures allowance must be made for the various factors enumerated in a preceding paragraph. South Australia, Western Australia, and Victoria, it will be noted, show the smallest proportion of serious crime, while the rates for New South Wales and the Northern Territory are the highest, the figures for the latter, however, owing to the particular conditions prevailing there being abnormal.

2. **Offences for which Convictions were recorded at Superior Courts.**—In the following table will be found a classification of the principal offences for which persons were convicted at the higher courts during each year of the period 1922 to 1926. Owing to lack of uniformity in the presentation of the returns the information is confined to the chief offences against the person only.

SUPERIOR COURTS.—CONVICTIONS, SERIOUS CRIME, AUSTRALIA, 1922 TO 1926.

Offences.	1922.	1923.	1924.	1925.	1926.
Murder, and attempts at ..	36	15	21	31	24
Manslaughter	10	15	13	10	13
Rape, and attempts at ..	5	9	5	8	15
Other offences against females ..	95	130	100	120	125
,, ,, ,, the person	240	246	217	253	235
Total	386	415	356	422	412

The total convictions for similar offences in 1901 amounted to 432, the decline during the period 1901 to 1926 amounting, therefore, to about 5 per cent. Stated according to the proportion per 10,000 of mean population, the rate in 1926 amounted to 0.68, as compared with a rate of 1.14 in 1901, the decrease for the period amounting, therefore, to over 40 per cent.

3. **Habitual Offenders.**—In New South Wales the Habitual Criminals Act of 1905 gives judges the power of declaring a prisoner, after a certain number of sentences, to be an habitual criminal, and as such to be detained until, in the opinion of the authorities, he is fit to be at large. At the 30th June, 1927, there were 50 persons in prison under this Act. Since the passing of the Act, 158 offenders, including 1 female, have been declared to be habitual criminals. So far the indeterminate sentence has been applied to the older hardened offender, but under the Crimes Amendment Act of 1924 when an accused person has been convicted on more than three occasions before a magistrate, the magistrate may direct an application to be made by the Clerk of the Peace to a Judge, to have the person so convicted declared an habitual offender.

The Indeterminate Sentences Act came into force in Victoria in July, 1908, and up to the end of June, 1927, 1,151 individual prisoners have been detained under its provisions. Of the 997 who were released on probation, 622 have not been returned, and, so far as is known, have not been reconvicted in any other State. At the 30th June, 1927, the number under indeterminate detention was 213. The Report of the Indeterminate Sentences Board states that, allowing for those who were recommitted as a precautionary measure while in the indeterminate stage, as well as for those who were convicted on some minor charge after many years of freedom, the percentage of successful results approximates 75. It is claimed that this figure compares favourably with that obtained under the Borstal system in England. Section 516 of the Crimes Act provides for the application of the indeterminate sentence under prescribed conditions to persons who have been convicted on three occasions at Courts of Petty Sessions. The section is seldom applied, but it is believed that it could be employed with advantage in many cases not only so far as the offenders themselves are concerned but in the interests of the public.

The Criminal Code Amendment Act of 1914, which makes provision for the detention and control of habitual criminals, was assented to in Queensland on the 3rd December, 1914, and the first cases in connexion therewith were dealt with in 1922, when 2 prisoners were declared to be habitual criminals. Up to the end of 1926, 18 prisoners had been declared habitual criminals, of whom 4 had completed the definite portion of their sentence, all being in Brisbane prison. Two habituals were discharged in 1925.

The provisions of the Habitual Criminals Amendment Act of 1907 were put into force in South Australia in 1909, and 25 criminals had been declared to be habitual offenders up to the end of 1926. Of these, 23 had been released after serving the indeterminate portion of their sentences. In Western Australia, under the Criminal Code Amendment Act of 1918, power is given to declare a prisoner after a certain number of convictions to be an habitual criminal. The number under preventive detention on the 30th June, 1927, was 31, and the total number dealt with since the passing of the Act was 193. During the period in which the Habitual Criminals and Offenders Act of 1907 (now Indeterminate Sentences Act 1921) has been in force in Tasmania, 141 prisoners have been released under its provisions, and the results, according to the Sheriff, have been satisfactory, only four prisoners having defaulted. The Indeterminate Sentences Act came into operation during 1924, and since then four prisoners have been discharged under its provisions, none of whom up to the end of 1926 had relapsed into crime.

The Comptroller-General of Prisons in New South Wales points out that the system has exercised a wholesome deterrent effect on the criminal who is not a prisoner, while the Indeterminate Sentence Board in Victoria states that it has become impressed with the advantages which this form of sentence offers, both from a reformatory and deterrent standpoint, over the ordinary sentence. In New South Wales it is stated that while old associations and habits have in some cases proved too strong for the released "habitual," many of them have done well, and, generally, there is hope of reformation in the average prisoner other than the sexual offender.

According to the Report of the English Prison Commissioners for the year 1925, however, the main value of preventive detention was considered to lie in the protection of the public rather than in the hope of any widespread reformation in the ranks of the professional criminal.

4. Capital Punishment.—The table below gives the number of executions in each State during the period 1922 to 1926:—

EXECUTIONS, 1922 TO 1926.

State.	1922.	1923.	1924.	1925.	1926
New South Wales	..	..	2	..	..
Victoria	1	..	1	..	..
Queensland	..	..	..	..	..
South Australia	..	..	..	..	3
Western Australia	1	..	..	..	..
Tasmania	1	..	..	..	..
Total	3	..	3	..	3

In the early days of the history of Australia the penalty of death was attached to a large number of offences, many of which at the present time would be dealt with in the lower or magistrates' courts. With the growth of settlement, and the general amelioration in social and moral conditions, the list was, however, considerably curtailed, and the existing tendency is practically to restrict death sentences to cases of murder. It may be remarked that in cases of rape, which is a capital offence in some of the Australian States, the penalty has been but sparingly inflicted during the last few years. Juries are reputed to be loth to convict on this charge, owing to the uncertainty whether sentence of death will be pronounced.

Under the Criminal Code Amendment Act of 1922, capital punishment was abolished in Queensland.

During the period 1861 to 1880 the annual average number of executions in Australia was 9, from 1881 to 1900 the average was 6, for the period 1901 to 1910 the figure was 4, from 1911 to 1920 it was 2, while the average for the last six years was less than 2.

§ 4. Prisons.

1. **Prison Accommodation and Prisoners, 1926.**—The table below shows the number of prisons in each State, the accommodation therein, and the number of prisoners in confinement at the end of 1926 :—

PRISON ACCOMMODATION AND PRISONERS, 1926.

State.	Number of Prisons.	Accommodation in—		Prisoners at End of Year.
		Separate Cells.	Wards.	
New South Wales	24	(a) 2,194	..	1,429
Victoria	14	1,290	400	915
Queensland	7	551	86	366
South Australia	13	622	422	326
Western Australia	22	669	848	208
Tasmania	1	130	..	81
Northern Territory	3	..	54	2
Total	84	5,411	1,810	3,327

(a) Total accommodation.

The figures refer to prisoners under sentence and are exclusive of aborigines.

2. **Prisoners in Gaol, 1922 to 1926.**—The number of prisoners in gaol at the 31st December in each of the years 1922 to 1926 is given below. As stated above, the figures refer to prisoners under sentence, and are exclusive of aborigines. A separate line is added in each instance showing the proportion per 10,000 of the population.

PRISONERS IN GAOL, 1922 TO 1926.

State.		1922.	1923.	1924.	1925.	1926.
New South Wales ..	Number ..	1,373	1,339	1,411	1,404	1,429
	Proportion	6.4	6.1	6.3	6.2	6.1
Victoria	Number ..	719	765	749	894	915
	Proportion	4.6	4.8	4.6	5.3	5.4
Queensland	Number ..	331	279	230	295	366
	Proportion	4.2	3.5	2.8	3.5	4.2
South Australia ..	Number ..	265	267	250	280	326
	Proportion	5.2	5.2	4.7	5.1	5.8
Western Australia	Number ..	196	226	201	219	208
	Proportion	5.8	6.5	5.6	5.9	5.5
Tasmania	Number ..	62	79	74	94	81
	Proportion	2.9	3.7	3.4	4.4	3.8
Northern Territory ..	Number ..	4	2	13	5	2
	Proportion	10.9	5.5	36.1	13.6	5.3
Total ..	Number ..	2,950	2,957	2,928	3,191	3,327
	Proportion	5.3	5.2	5.0	5.4	5.5

The proportion to population of prisoners in gaol under sentence has risen slightly in Australia during the last five years, but, if the comparison be carried farther back, the position is seen to be more favourable, the proportion in 1891 being as high as 16 per 10,000.

3. **Improvement of Penological Methods.**—(i) *New South Wales.* During recent years Australia, in common with most other civilized countries, has introduced considerable modifications and improvements in methods of prison management. Under the old system, punishment partook more or less of the character of reprisal for wrongdoing, and the idea

of constituting the prison as a reformative agency was in the background. But in recent years there has been an earnest attempt at effecting a moral reformation in the unfortunates who lapse into crime. This aspect of prison management has been specially prominent in New South Wales. A short account of the reorganization of the prison system in this State appeared in the earlier Year Books, but considerations of space preclude its repetition here. At the present time it is found that good results have followed the principles of scientific classification and restricted association of prisoners, together with the provision of separate institutions for the treatment of inebriates. Until recently the prison authorities were confronted with a difficult problem arising from the fact that so little could be done in the case of short-sentenced prisoners, but the passing of the Crimes Act of 1924, alluded to previously, under which such persons could, after repeated convictions, be declared "habituals," and as such liable to reformative detention, will, it is hoped, lead to considerable improvement. Special efforts are put forward to provide reproductive work of a regular and intelligent nature, and for the year 1926–7 the value of the prisoners' labour amounted to £86,000, as compared with £35,000 in 1913. Very few skilled tradesmen are received into gaol, the great majority of prisoners being unskilled at any trade, and many being drunkards, vagrants, and physical and moral degenerates. At the chief penitentiaries for males and females in the metropolis, a careful classification of prisoners is carried out, and provision is made for the treatment of special cases at some of the larger country gaols. Young first offenders are employed at the Emu Plains Prison Farm, and first offenders over the age of 25 years are drafted to the Prisoners' Afforestation Camp at Tuncurry, on the Manning River. Both of these institutions have given very satisfactory results. The total area set apart for afforestation is 3,380 acres, of which about two-thirds have been planted. About 200,000 pine seedlings were raised in 1926, and over 2,000,000 trees, some exceeding 50 feet in height, are flourishing. The Department receives the benefit of advice and assistance from the Forestry Commission, and has opened another large area at Mila, Bombala, where younger prisoners will be accommodated. The Shaftesbury Inebriate Institution was established in 1915 for the treatment of non-criminal inebriates, and in the following year provision was made for the accommodation and treatment of voluntary paying guests. Suitable cases from the Long Bay prison are transferred to the Shaftesbury Institution.

In many instances prisoners received into the gaols are found to be suffering from contagious diseases, and, under the Prisoners Detention Act such persons may be detained until cured. It is found also that many persons who commit crimes are mentally unbalanced, and need curative rather than punitive treatment. Careful investigation of the mental condition of all prisoners is conducted at the observation ward in the Penitentiary.

Amongst other improvements introduced during the last few years were the relieving of the monotony of the non-working hours at week ends by the provision of concerts, lectures, and suitable picture shows at the principal gaols, by more open-air exercise on Saturday afternoons and Sundays, and by the supply of a greater variety of interesting books and magazines to the prison libraries. These libraries now contain over 24,000 volumes. Prisoners are encouraged to take up courses of study likely to be of service to them on their discharge, writing materials are provided, and, within reason, the text-books required are purchased for their use. Tutorial classes for young prisoners have been instituted, and the results so far have been very encouraging. As the Comptroller-General points out, these changes have been brought about, not from sympathy with the criminal, but as ordinary necessities to the wholesome functioning of the mind. In 1924 a revised dietary scale came into operation, under which prisoners are supplied with greater quantity and greater variety of food.

In 1902 the system of finger-print identification of criminals was introduced, and in the following year bureaux were established in the various States for the exchange of records. Very successful results have attended the introduction of the system.

Allusion may be made here to the excellent work performed by the Prisoners' Aid Association, which has branches in the country towns where there are prisons. Members of the organization meet prisoners on their discharge, help in restoring hopeful cases to reputable relatives and friends, assist in obtaining situations, and generally maintain a friendly supervision over those in need of assistance. Fine work is being done by the chaplains and sisters of the various religious bodies, including the Salvation Army.

(ii) *Victoria.* In Victoria there is an excellent system of classification and allocation of prisoners in various grades to different gaols, while at the important penal establishment at Pentridge careful segregation into several classes is carried out. First offenders are placed in the "special" division, and it is stated that very few of the prisoners in this class discharged from Pentridge are known to have been reconvicted. In common with the other States the latest humane methods of accommodation and prison treatment have for some time been employed. The younger prisoners spend a portion of each week day at school, and evening school or recreational classes are held from 7 p.m. to 9 p.m. at the Reformatory. Voluntary classes for older prisoners have been formed by the Prisoners' Aid Society. In addition, where the necessary arrangements can be made, well-behaved prisoners are allowed to take correspondence lessons from outside institutions. Text books, dictionaries, and books of reference are supplied on loan within reason to prisoners who desire to use them. An afforestation camp known as McLeod Settlement, French Island, was opened in 1916, and at the 31st December, 1926, there were 35 inmates. In addition to the work of afforestation, portion of the land has been laid down in crops, and some attention given to poultry and pig-keeping. It is stated that the experiment has resulted in improvement both in demeanour and physique of prisoners, and in many cases has led to a return to honest citizenship. A farm has been established about 3 miles from the prison at Castlemaine with provision for 14 inmates, while others are taken to and fro daily. The number in confinement at the end of December, 1926, was 70. The orchard planted in connexion with the farm contains about 1,000 fruit trees. A large number of poultry is kept, and provision has been made for practical instruction in farming, carpentering and other work which will help in securing employment for prisoners on release.

The results of intelligence tests carried out at the Castlemaine Reformatory show a considerable amount of mental deficiency, particularly amongst sexual offenders. Further tests in regard to larger numbers of the latter class will, however, be necessary to determine whether mental deficiency is characteristic of this class.

Under the Venereal Diseases Act, prisoners where necessary receive medical treatment, and after release the treatment where required is continued outside the prison at places gazetted by the Health Department. Provision is also made for dental attention where necessary, the treatment being free if the prisoner is unable to pay or to make arrangements for payment.

As mentioned previously, the Indeterminate Sentences Board advocate the application of the indeterminate sentence in the case of the habitual petty offender.

Aid is given to discharged prisoners by the Salvation Army and by various church organizations and welfare committees.

(iii) *Queensland.* Queensland prisons have been considerably modernized during the last few years. Amongst recent reforms may be mentioned the provision of a separate institution at Brisbane for long-sentence prisoners, and the extension of the principle of classification and separation. Juvenile offenders, i.e., those between the ages of 16 and 21 years, are kept apart from other prisoners and treated in accordance with the latest reformative methods. Many of the prisoners received, both in the adult and junior stage, come from the ranks of the idle, the thriftless, and the unskilled, and efforts are made to teach these some useful calling, and to help them to form habits of industry. It has been found in Queensland, as is the case elsewhere, that very few skilled workmen are criminals. The penal establishment at St. Helena has been converted into a farm colony, and well conducted prisoners receive special treatment there during the later stages of their sentences. Greater facilities have been provided for the instruction of prisoners in trades which will afford them a means of earning a livelihood on their release, and the prison libraries have been replenished with useful and interesting literature. The cells in the principal prisons have been provided with lights, and prisoners are allowed to read and study up to a reasonable hour at night. Under the provisions of the Health Act, prisoners suffering from venereal disease may be detained until danger of infection has ceased.

Excellent work in aid of discharged prisoners is carried on by the Salvation Army, while the "William Powell Home," through its secretary, renders valuable service. The Comptroller-General, in his Report for the year 1926, draws attention to the need of an organized State system of assisting released prisoners.

(iv) *South Australia.*—The present system of gaol administration was drafted mainly on English and European lines by the late W. R. Boothby, C.M.G., and has since been as far as possible adapted to modern penological procedure. At the Yatala Labour Prison, which is the largest in the State, the prisoners are graded into three classes—first offenders, second offenders, and old offenders, the various classes being kept apart. Declared inebriates under "The Convicted Inebriates Act 1913" are as a rule received at the Adelaide Gaol and thence transferred to the Institution at Gladstone. During the year 1924 new regulations were introduced chiefly with the view to encourage prisoners to take greater interest in the results of their labour. Industrious prisoners are able to earn monetary payment, and are allowed to remit a portion of their earnings to dependents in need of pecuniary help. A more liberal dietary scale has been introduced, and well-conducted prisoners are allowed to supplement this from their earnings. Permits are granted to prisoners to earn money by working in their cells at night. Facilities are afforded to help prisoners who desire to improve themselves educationally, and greater provision has been made for recreation. Under the amending Prisons Act of 1924, prisoners who have completed not less than half their sentences may apply for conditional release. Up to the end of 1926, a total of 30 prisoners had been so released, of whom 2 had their certificates revoked. Special district probation officers have been appointed, who visit and assist all persons released on probation.

Various religious organizations devote attention to the periodical visiting of prisoners in the gaols, while fine work is done by the Prisoners' Aid Association in helping released prisoners to obtain employment, or return to their homes in other States.

(v) *Western Australia.* A Royal Commission in 1911 recommended the adoption of various reforms in connexion with the prison system of Western Australia. The bulk of these were carried out, and included, amongst other things, an extension of the principle of separate treatment, improvement in prisoners' dietary scale, more satisfactory arrangements in regard to remission of sentences, and better conditions in regard to hours of labour, leave of absence, etc., for the staff. Amongst other improvements introduced may be mentioned the grant of an eight hours' day to officers, enlargement and improved hygiene of cells, additional library facilities, assistance to discharged prisoners by provision of railway passes and monetary aid, appointment of committees to look after the welfare of discharged prisoners, and the remodelling of the "mark" system. Under the Prisons Act Amendment Act of 1918 a portion of Fremantle Prison was set aside as a reformatory prison in 1919, and first offenders are kept separate from other prisoners. Provision is also made for the appointment of an Indeterminate Sentences Board, and conditions are laid down under which prisoners may be released on probation or parole. A State Prison Farm has been established on a site at Pardelup and good-conduct prisoners may be transferred there from Fremantle. The farm covers an area of 3,300 acres and the first inmates were transferred thereto in 1927.

The Prison Gate Committee affords assistance to discharged prisoners by finding work and helping in other ways.

(vi) *Tasmania.* The number of convicted prisoners in confinement in Tasmanian gaols at the end of 1926 was 81. The completion of alterations to the Hobart gaol has facilitated the classification of offenders, and afforded greater opportunities for teaching trades. Youthful offenders are kept apart from ordinary prisoners.

(vii) *Psychology of the Criminal.* The Director of the State Psychological Clinic at Hobart recently stated that an examination of the prisoners in Hobart Gaol showed that nearly two-thirds were "deviates" from the normal, and he stressed the necessity for devising means for the discovery and possible correction of abnormal tendencies in childhood. He alluded also to the connexion between brain development and mental development, and pointed out that in Hobart Gaol 84 per cent. of the defectives were small-headed. In the Prisons Report for New South Wales for the year 1925 the Visiting Surgeon to the State Penitentiary remarks: "The majority of cases that have come under my observation this year are undoubtedly persons below the normal standard of mentality, and the question always arises, are they mentally responsible or no?" Attention is also drawn to the fact that many adult criminals are mentally and morally under the age of discretion. Intelligence tests conducted at the Pentridge Gaol, Melbourne, in 1924–5 showed a percentage of 61 in the sub-normal stage.

§ 5. Civil Courts.

1. **Lower Courts.**—The transactions of the lower courts on the civil side during each of the last five years are given in the table hereunder. As pointed out previously, the jurisdiction of the courts is by no means uniform in the various States :—

LOWER COURTS.—CIVIL CASES, 1922 TO 1926.

State.		1922.	1923.	1924.	1925.	1926.
New South Wales ..	Cases No.	38,828	48,760	53,997	70,798	77,365
	Amount £	163,803	198,558	220,442	249.418	288 735
Victoria	Cases No.	47,140	58.502	73,264	82,589	90,299
	Amount £	295,697	413,417	497,833	552,788	611,528
Queensland ..	Cases No.	16,023	18,329	17,607	17.226	18,255
	Amount £	122,684	155,314	178,018	189.742	218.742
South Australia ..	Cases No.	23,030	25,839	29,101	33,650	36,113
	Amount £	123.569	142,217	182.930	197,924	209.658
Western Australia ..	Cases No.	15,991	16,649	18,705	21,029	21,626
	Amount £	71,457	76,208	91,100	97.415	118.044
Tasmania	Cases No.	7,246	7,879	7,950	10,332	10.248
	Amount £	59,137	57,014	62,234	73,415	76,272
Total ..	Cases No.	148.258	175,958	200,624	235,624	253,906
	Amount £	836,347	1,042,728	1,232,557	1,360,702	1,522,979

The figures just given represent the returns from Petty Sessions Courts in New South Wales and Victoria, the Petty Debts Courts in Queensland, the Local Courts of South Australia and Western Australia, and the Courts of Requests in Tasmania.

2. **Superior Courts.**—In the next table will be found the transactions on the civil side in the Superior Courts during each of the years 1922 to 1926.

The New South Wales returns refer to the total amounts of judgments in the District Courts, and are exclusive of judgments signed in the Supreme Court, for which the amount is not available.

SUPERIOR COURTS.—CIVIL CASES, 1922 TO 1926.

State.		1922.	1923.	1924.	1925.	1926.
New South Wales ..	Causes No.	1,386	1,557	1,618	1,563	1,786
	Amount £	500,862	578,774	259,327	257,211	274,605
Victoria	Causes No.	863	996	1,041	1,032	1,076
	Amount £	213,597	237,145	303,140	341,184	330,647
Queensland ..	Causes No.	187	245	225	242	274
	Amount £	21,914	17,645	9,861	13,114	16,168
South Australia ..	Causes No.	55	60	146	174	178
	Amount £	10,300	3,923	7,654	64,821	56,664
Western Australia ..	Causes No.	195	205	272	300	320
	Amount £	40,119	34,207	87,495	87,653	53,573
Tasmania	Causes No.	474	525	548	634	611
	Amount £	28,952	30,127	42,624	26,667	24,914
Total ..	Causes No.	3,160	3,588	3,850	3,945	4,245
	Amount £	815,744	901,821	710,101	790,650	756,571

3. Divorces and Judicial Separations.—The number of divorces and judicial separations in each State during the period 1922 to 1926 is shown below. The figures refer in the case of divorces to decrees made absolute in each year and include decrees for nullity of marriage.

DIVORCES AND JUDICIAL SEPARATIONS, 1922 TO 1926.

State.	1922.		1923.		1924.		1925.		1926.	
	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.	Divorces.	Judicial Separations.
New South Wales	684	9	739	13	838	7	1,071	11	834	12
Victoria	376	2	429	2	407	1	455	3	468	2
Queensland	47	..	75	2	105	..	85	2	99	1
South Australia	76	..	90	..	77	..	85	..	71	1
Western Australia	110	1	101	..	89	..	121	..	127	..
Tasmania	33	..	29	..	20	..	37	..	34	..
Northern Territory ..	..	..	..	..	..	..	..	..	..	..
Total	1,326	12	1,463	17	1,536	8	1,854	16	1,633	16

The average annual number of divorces and judicial separations in Australia at decennial periods from 1871 to 1920 and during the sexennium 1921–26 was as follows :—

DIVORCES AND JUDICIAL SEPARATIONS.—AUSTRALIA, 1871 TO 1926.

	1871–1880.	1881–90.	1891–1900.	1901–10.	1911–20.	1921–26.
Averages ..	29	70	358	401	707	1,564.

The bulk of the divorces and judicial separations refer to New South Wales and Victoria, the Acts of 1899 and 1889 in the respective States having made the separation of the marriage tie comparatively easy. In some statistical works it is customary to compare the divorces in any year with the marriages in the same year. The comparison is, however, quite valueless, as there is no necessary connexion between the figures.

4. Probates.—The number of probates and letters of administration granted, together with the value of the estates concerned, are given below for each State for the period 1922 to 1926 :—

PROBATES AND LETTERS OF ADMINISTRATION, 1922 TO 1926.

State.		1922.	1923.	1924.	1925.	1926.
New South Wales ..	Number	5,681	6,281	6,410	6,909	7,064
	Value £	15,441,378	16,429,860	17,970,385	18,390,924	18,138,133
Victoria	Number	5,445	6,283	5,540	5,204	5,863
	Value £	12,641,263	15,070,725	12,831,268	13,227,243	14,313,367
Queensland	Number	1,002	1,073	922	897	1,173
	Value £	3,591,531	3,594,467	3,258,981	3,367,784	4,686,319
South Australia ..	Number	1,786	1,823	2,001	1,942	1,972
	Value £	3,683,202	4,043,547	4,065,615	4,366,425	4,182,041
Western Australia ..	Number	942	907	949	1,038	1,096
	Value £	979,214	1,358,846	1,639,479	1,724,727	1,897,539
Tasmania	Number	545	569	622	541	557
	Value £	1,211,764	1,283,638	1,281,006	1,262,103	1,412,543
Northern Territory ..	Number	27	19	20	28	43
	Value £	5,411	6,006	27,953	10,246	23,840
Total	Number	15,428	16,955	16,464	16,559	17,768
	Value £	37,553,763	41,787,089	41,074,687	42,349,452	44,653,782

5. **Bankruptcies.**—(i) *General.* The returns in bankruptcy during each of the last five years are given in the following table.

For several reasons comparisons drawn from these figures are of little value. In the first place, the statements of assets and liabilities are notably unsatisfactory, particularly in regard to the former. Then, again, there is wide dissimilarity in regard to the laws in force in the various States and the methods of procedure thereunder in connexion with bankruptcy. The figures quoted in the table exclude private arrangements in Victoria, South Australia, and Western Australia, and the liquidations and compositions in Queensland and Tasmania.

The Bankruptcy Act (No. 37 of 1924) and the Bankruptcy Act (No. 3 of 1927) passed by the Commonwealth Parliament provide for the transfer of jurisdiction in Bankruptcy to the Commonwealth, and the regulations under these acts have been gazetted.

BANKRUPTCIES, 1922 TO 1926.

State.		1922.	1923.	1924.	1925.	1926.
New South Wales ..	Number ..	481	668	668	716	781
	Liabilities £	440,856	659,314	742,079	878,708	736,149
	Assets £	251,185	282,657	303,315	438,796	353,028
Victoria	Number ..	322	414	520	563	683
	Liabilities £	349,118	323,540	504,678	446,438	493,428
	Assets £	189,016	152,602	311,290	249,251	224,316
Queensland.. ..	Number ..	148	204	247	275	267
	Liabilities £	90,790	109,211	184,979	170,053	207,061
	Assets £	42,012	55,185	76,462	100,259	94,795
South Australia ..	Number ..	110	137	167	161	213
	Liabilities £	158,987	173,632	262,959	344,542	341,113
	Assets £	102,738	116,333	167,982	236,713	195,594
Western Australia ..	Number ..	36	41	44	44	60
	Liabilities £	36,510	50,449	36,488	37,962	51,451
	Assets £	16,961	24,018	23,388	11,219	37,785
Tasmania	Number ..	1	7	3	7	7
	Liabilities £	1,170	7,685	1,705	8,577	6,867
	Assets £	..	4,337	692	3,460	1,394
Northern Territory ..	Number ..	2	2	1	..	1
	Liabilities £	175	141	(a)	..	(a)
	Assets £	..	40	(a)	..	(a)
Total	Number ..	1,100	1,473	1,650	1,766	2,012
	Liabilities £	1,077,606	1,323,972	1,732,888	1,886,280	1,836,069
	Assets £	601,912	635,172	883,759	1,039,698	906,912

(a) Not stated.

In consequence of amendments in the returns made by the Crown law authorities in Tasmania, considerable alterations became necessary in the totals for that State for the years 1922 to 1925, and these involved corresponding changes in the aggregates for Australia for the same years.

(ii) *Deeds of Arrangement, etc.* The figures given above are, as explained, exclusive of private arrangements. For New South Wales the returns show that no compositions were effected in 1926. In Victoria during 1926 the deeds of arrangement numbered 204, the declared liabilities and assets being £287,767 and £222,693 respectively. Liquidations under the Insolvency Act in Queensland numbered 21, the total liabilities and assets amounting to £53,644 and £38,583 respectively. In South Australia, 226 compositions were arranged during the year. Under the Bankruptcy Amendment Act of 1898, 13 compositions, 12 schemes of arrangement, and 64 deeds of assignment were made in Western Australia, but particulars regarding the liabilities and assets involved are not available. In Tasmania, 34 liquidations, involving liabilities £17,363 and assets £15,561, and 19 compositions, involving liabilities £13,322 and assets £4,273, were arranged during 1926.

6. **High Court of Australia.**—Under the provisions of section 71 of the Commonwealth Constitution Act, the judicial power of the Commonwealth is vested in a Federal Supreme Court, called the High Court of Australia, and in such other courts as the Parliament creates or invests with federal jurisdiction. The Federal High Court possesses both original and appellate jurisdiction. The powers of the Court are defined in Chapter III. of the Constitution Act and in the Judiciary Acts of 1903–26. At present the Court

consists of a Chief Justice and six other judges. Sittings of the Court are held in the capitals of the various States as occasion may require. The following statement shows the transactions of the High Court for the quinquennium 1922–26 :—

COMMONWEALTH HIGH COURT.—TRANSACTIONS, 1922 TO 1926.

Items.	1922.	1923.	1924.	1925.	1926.
I. ORIGINAL JURISDICTION.					
Number of writs issued	183	82	88	138	160
Number of causes entered for trial ..	30	15	7	21	25
Verdicts for plaintiffs	6	5	4	8	6
Verdicts for defendants	9	1	1	3	6
Otherwise disposed of	61	9	2	10	13
Amount of judgments	£18,579	£5,525	£23,724	£11,810	£6,018
II. APPELLATE JURISDICTION.					
Number of appeals set down for hearing	96	72	101	76	80
Number allowed	39	27	39	24	36
Number dismissed	48	35	46	34	38
Otherwise disposed of	9	10	16	18	6
III. AMOUNT OF FEES COLLECTED.					
Amount in each year	£802	£586	£789	£1,185	£1,057

During the year 1926 the Court dealt also with other matters as follows :—

Appeals from Assessments under the Taxation Assessment Acts ..	22
Special cases stated for the opinion of the Full Court	11
Applications for Prohibition	1

7. **Commonwealth Court of Conciliation and Arbitration.**—A more or less detailed statement regarding the operation of this Court, which was established under the provisions of the Commonwealth Conciliation and Arbitration Act of 1904–26, will be found in Chapter XIII.

§ 6. Cost of Administration of Justice.

1. **Expenditure by the States.**—The table below shows the expenditure from Consolidated Revenue during each of the last five years in connexion with the administration of justice in each of the States. Expenditure on police and on prisons are given on separate lines. With regard to the figures quoted for "other" expenditure, a slight allowance has to be made for the fact that some extraneous expenditure has been included which it was found impossible to disentangle from the total, but the amount is in no instance large.

STATE EXPENDITURE ON JUSTICE, 1922 TO 1926.

State.		1922.	1923.	1924.	1925.	1926.
		£	£	£	£	£
New South Wales ..	Police	1,205,557	1,219,244	1,317,320	1,331,978	1,370,659
	Gaols	145,887	138,137	150,052	162,411	174,902
	Other	395,691	415,420	428,437	428,726	444,295
Victoria	Police	600,856	755,698	741,126	768,939	840,653
	Gaols	80,363	101,233	99,732	117,577	114,397
	Other	233,452	252,995	259,626	265,748	285,321
Queensland ..	Police	455,519	461,446	497,484	554,879	563,391
	Gaols	34,068	34,635	38,239	39,874	44,255
	Other	144,341	149,492	170,350	190,495	175,264
South Australia ..	Police	216,109	221,635	246,646	250,915	263,857
	Gaols	34,520	37,388	41,257	46,240	49,165
	Other	50,459	64,549	65,447	70,431	68,805
Western Australia..	Police	181,893	185,945	193,461	216,798	224,690
	Gaols	27,440	26,102	25,970	25,989	28,079
	Other	91,605	99,250	92,816	97,364	108,351
Tasmania ..	Police	77,096	78,313	81,318	84,340	88,725
	Gaols	9,643	9,475	9,426	9,446	10,858
	Other	32,921	33,487	38,381	37,680	37,001
Northern Territory *a*	Police	16,011	16,070	17,923	19,004	19,656
	Gaols	4,403	4,148	4,469	4,432	4,746
	Other	2,664	2,611	3,078	3,226	3,359
Total ..	Police	2,753,041	2,938,351	3,095,278	3,226,853	3,371,631
	Gaols	336,324	351,118	369,145	405,969	426,402
	Other	951,133	1,017,804	1,058,135	1,093,670	1,122,396

(*a*) See 2, Federal Expenditure, next page.

The rise in expenditure during the last few years was due chiefly to increases in wages and salaries and heavier outlay on stores and supplies.

For the purposes of comparison the figures in the table above have been reduced to a population basis, and the results are given in the table following :—

STATE EXPENDITURE ON JUSTICE—PER HEAD, 1922 TO 1926.

State.		1922.		1923.		1924.		1925.		1926.	
		s.	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*
New South Wales ..	Police	11	1	11	0	11	8	11	7	11	9
	Gaols	1	4	1	3	1	4	1	5	1	6
	Other	3	8	3	9	3	10	3	9	3	10
Victoria	Police	7	7	9	4	8	11	9	2	9	11
	Gaols	1	0	1	3	1	2	1	5	1	4
	Other	2	11	3	1	3	2	3	2	3	4
Queensland	Police	11	7	11	5	11	11	12	11	12	11
	Gaols	0	10	0	10	0	11	0	11	1	0
	Other	3	8	3	8	4	1	4	5	4	0
South Australia ..	Police	8	5	8	5	9	2	9	1	9	5
	Gaols	1	4	1	5	1	6	1	8	1	9
	Other	2	0	2	6	2	5	2	7	2	6
Western Australia ..	Police	10	7	10	6	10	7	11	8	12	0
	Gaols	1	7	1	6	1	5	1	5	1	6
	Other	5	4	5	7	5	1	5	3	5	9
Tasmania	Police	7	0	7	2	7	6	7	9	8	5
	Gaols	0	11	0	10	0	10	0	10	1	0
	Other	3	0	3	1	3	6	3	6	3	6
Northern Territory (*a*) ..	Police	90	2	90	5	99	7	104	0	104	5
	Gaols	24	10	23	4	24	10	24	3	25	2
	Other	15	0	14	8	17	1	17	8	17	10
Total	Police	9	9	10	3	10	6	10	9	11	2
	Gaols	1	2	1	3	1	3	1	4	1	5
	Other	3	5	3	6	3	7	3	8	3	9

(*a*) See 2 below.

Owing to the smallness of the white population, large area to be policed, and cost of supplies, transport, etc., the figures for the Northern Territory must necessarily appear somewhat abnormal.

The total expenditure in connexion with the administration of justice in the various States has risen from 10s. per inhabitant in 1901 to 16s. 4d. in 1926. Police expenditure increased by 5s. 5d. per head, the average for gaols by 3d. per head, while the expenditure on courts and the remaining machinery of justice increased by 8d. per head during the period. Increased salaries and allowances, and the heavier cost of materials and equipment were largely responsible for the rise in the rate per head during the last few years.

2. **Federal Expenditure.**—(i) *High Court.* With the exception of that for the Northern Territory, the expenditure shown in the foregoing tables is that incurred by the State Governments only, and does not include expenditure in connexion with the Federal High Court, which is given hereunder for the period 1921–22 to 1926–27 :—

EXPENDITURE ON FEDERAL HIGH COURT, 1921-22 TO 1926-27.

Year.	Amount.	Year.	Amount.
	£		£
1921–22	33,776	1924–25	34,769
1922–23	35,458	1925–26	35,500
1923–24	35,645	1926–27	36,494

(ii) *Total Expenditure.* Other items of expenditure during 1926–27 by the Commonwealth Attorney-General's Department include—Secretary's office, £26,801 ; Crown Solicitor, £24,465 ; Court of Conciliation and Arbitration, £23,162 ; Public Service Arbitrator, £4,220 ; Investigation Branch, £10,189. Including the High Court expenditure, but excluding that in connexion with Patents and Copyright, the total expenditure by the federal law authorities in 1926–27 amounted to £150,392.

CHAPTER XI.

PUBLIC BENEVOLENCE.

§ 1. Introductory.

1. **General.**—Charity and charitable effort in Australia may be classified under three headings, viz. :—(*a*) State ; (*b*) public ; (*c*) private. To the first belong all institutions wholly provided for by the State, such as the principal hospitals for the insane in the various States, the Government hospitals in Western Australia, and the Government asylums for the infirm in New South Wales. The second class comprises public institutions of two kinds, viz. :—(i) those partially subsidized by the State or State endowed, but receiving also private aid, and (ii) those wholly dependent upon private aid. To the former division belong such institutions as the principal metropolitan hospitals. In the latter are included institutions established and endowed by individuals for the benefit of the needy generally. All charitable movements of a private character are included in the third group. A more or less accurate statistical account is possible in classes (*a*) and (*b*), but in regard to (*c*) complete tabulation is, for obvious reasons, impossible. Owing to differences in the method and date of collection and tabulation, it is impossible to bring statistics of charitable institutions to a common year.

No poor-rate is levied in Australia, and Government aid without return is required only for the aged and disabled. Moreover, although Old-age Pensions, Invalid Pensions, and Maternity Allowances are paid by the Commonwealth, the payments are looked upon rather in the light of a citizen's right than as a charity. Reference to these matters will be found in § 6 and 7 of Chapter VIII. " Finance."

From time to time relief funds have been organized for famine-stricken countries in various parts of the world, or for places where plagues, flood, fire, or earthquake have shown the need of urgent relief. Special funds were also raised for persons disabled or bereaved through war. Complete statistical information in regard to these forms of charity is not, however, available. It may be mentioned that the daily Press frequently accepts the duty of collectorship in charity appeals. In regard to subscriptions to the various patriotic funds which were instituted in consequence of the war, the total for Australia is estimated to exceed £12,500,000 sterling.

§ 2. The Larger Charities of Australia.

1. **Hospitals.**—(i) *General.* All the State capitals have several large and well-equipped hospitals, and there is at least one in every important town. In large centres there are hospitals for infectious diseases, consumptives, women, children, incurables, etc.

(ii) *Principal Hospitals in each State.* The particulars given herein refer to general hospitals at latest available date, and include all institutions affording general hospital relief.

(*a*) *New South Wales.* A Government hospital, with a staff of 32 medical officers and accommodation for about 720 patients, is established at Little Bay, near Sydney. Altogether, there are 4 hospitals for women, 1 for women and children, and 3 for children in the metropolis. The Royal Prince Alfred Hospital, with a medical staff of 90 and with 584 beds, is the largest metropolitan subsidized institution. Amongst other large metropolitan hospitals may be mentioned the Sydney Hospital, with a medical staff of 69 and with 415 beds, St. Vincent's with 58 doctors and 220 beds, and Lewisham with 46 medical attendants and 292 beds. In extra-metropolitan areas the Waterfall Hospital for Consumptives, which is a Government institution, provides accommodation for 419 patients. The Newcastle Hospital has 188 beds and a medical staff of 21. At the Carrington Convalescent Home at Camden there is provision for 110 patients. The hospital in the Broken Hill district can accommodate 186. Upwards of 300,000 out-patients received treatment at the various hospitals.

(*b*) *Victoria.* There are several large metropolitan hospitals in Victoria. The largest of these, the Melbourne Hospital, has 358 beds, while attendances of outpatients for the latest year available numbered 265,000 ; the Alfred Hospital had 340 beds, out-patients' attendances numbered 201,000 ; the Austin Hospital for Incurables had 294 beds, St. Vincent's 120, and the Homœopathic 73. Amongst the country institutions, Bendigo had 222 beds, Geelong 162, and Ballarat 202.

(*c*) *Queensland.* Of the metropolitan hospitals, the largest is the Brisbane General, which can accommodate 384 patients. The Children's Hospital has 260 beds, the

Diamantina 176, and the Mater Misericordiæ 127. The larger country hospitals are those at Toowoomba, Ipswich, Townsville, Rockhampton, Bundaberg, Cairns, Charters Towers, and Maryborough.

(*d*) *South Australia.* Including the Consumptive Home and Infectious Diseases Block, the Adelaide Hospital can accommodate a total of 580 patients. The average daily number of patients in 1926 was 422, and the number in hospital at the end of the year was 374.

(*e*) *Western Australia.* In the metropolis 5,206 cases were treated at the Perth Hospital in 1926, 1,882 at the Perth Children's Hospital, and 1,624 at the King Edward Maternity Hospital. At Fremantle Hospital the cases treated numbered 1,388, at Kalgoorlie 909, at Northam 766, and at Collie 547.

(*f*) *Tasmania.* There are well-equipped general hospitals in Hobart and Launceston. The former can accommodate 250 patients, with additional verandah accommodation if required, and the latter has 253 beds. Hospitals for women have been established in both centres, and there is a sanatorium for consumptives at New Town. Outside the metropolitan area there are institutions in the important country centres, the principal being the Devon Cottage, and the Lyell District Hospitals.

(*g*) *Northern Territory.* In addition to the hospitals at Darwin and Pine Creek, supplies of medicines and first aid are available to outlying stations.

(iii) *Number, Staff, and Accommodation, 1926.* Details regarding the number of hospitals, staffs, and accommodation for the year 1926, or nearest available year, are given in the appended table :—

GENERAL HOSPITALS.—NUMBER, STAFFS, AND ACCOMMODATION, 1926.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Total.
Number of Hospitals—								
Government	4	..	3	11	27	3	3	51
Other	157	53	106	34	42	13	2	407
Total ..	161	53	109	45	69	16	5	458
Medical Staff—								
Males	927	114	270	159	56	46	1	1,876
Females	289		8	5	1	..	..	
Total ..	1,216	114	278	164	57	46	1	1,876
Nursing Staff and Attendants—								
Males	104	..	369	97	113	3	2	688
Females	3,125	983	2,027	890	816	238	12	8,091
Total ..	3,229	(*a*) 983	2,396	987	929	241	14	8,779
Accommodation—								
Number of dormitories, wards, etc. ..	1,227	458	691	386	301	155	10	3,228
Capacity, in cubic feet ..	9,322,830	5,200,175	4,662,281	2,267,558	2,660,139	1,016,486	31,600	25,161,069
Number of beds, etc. ..	8,245	3,902	3,955	1,775	2,015	809	83	20,784
Cubic feet to each bed	1,130	1,333	1,179	1,277	1,333	1,256	770	1,209

(*a*) Victorian figures are exclusive of 912 nursing staff and 18 dispensing staff, sexes not available.

(iv) *Patients Treated.* The table hereunder furnishes particulars respecting patients treated. In addition to the facilities provided in the ordinary wards, a considerable amount of accommodation for certain classes of cases is furnished in out-door or verandah sleeping places, and this can be augmented ; full particulars in connexion with these are not available. So far as the returns show, there were 1,229 out-door beds in New South Wales, 149 in Queensland, 171 in South Australia, 58 in Western Australia, 67 in Tasmania, and 42 in the Northern Territory. These figures are not included in the totals given in the table below :—

GENERAL HOSPITALS.—PATIENTS TREATED, 1926.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Total.
Indoor Relief: Persons Treated—								
Males	67,502	22,580	36,249	11,337	12,530	6,069	269	156,536
Females	63,501	17,249	23,885	10,640	9,225	6,423	123	131,046
Total ..	131,003	39,829	60,134	21,977	21,755	12,492	392	287,582
Inmates at beginning of year—								
Males	2,877	1,410	1,755	596	671	252	23	7,584
Females	2,631	968	1,143	436	436	256	5	5,875
Total ..	5,508	2,378	2,898	1,032	1,107	508	28	13,459
Admissions and Re-admissions during year—								
Males	64,625	21,170	34,494	10,996	11,859	5,817	246	149,207
Females	60,870	16,281	22,745	10,410	8,779	6,167	118	125,370
Total ..	125,495	37,451	57,239	21,406	20,638	11,984	364	274,577
Discharges—Recovered:								
Males	47,635	18,715	31,639	6,550	6,279	4,974	219	116,011
Females	48,279	14,702	21,119	7,138	5,901	5,437	101	102,677
Total ..	95,914	*a* 33,417	52,758	13,688	12,180	10,411	320	218,688
Relieved:								
Males	10,823	..	..	2,988	4,313	*b*	..	*c*
Females	8,118	..	..	2,224	2,242	*b*	..	*c*
Total ..	18,941	*b*	*b*	5,212	6,555	*b*	..	*c*
Unrelieved or Incurable:								
Males	1,997	250	693	580	357	451	..	4,328
Females	1,700	186	427	409	231	484	..	3,437
Total ..	3,697	436	1,120	989	588	935	..	7,765
Not stated or Indefinite:								
Males	..	143	..	97	..	55	..	295
Females	..	103	..	93	..	36	..	232
Total ..	..	246	..	190	..	91	..	527
Deaths—								
Males	3,979	2,036	1,971	793	831	315	19	9,944
Females	2,580	1,205	1,035	503	413	226	6	5,968
Total ..	6,559	3,241	3,006	1,296	1,244	541	25	15,912
Inmates at end of year—								
Males	3,068	1,436	1,736	584	750	274	31	7,879
Females	2,824	1,053	1,156	479	438	240	16	6,206
Total ..	5,892	2,489	2,892	1,063	1,188	514	47	14,085
Average Daily Number Resident—								
Males	*c*	*c*	*c*	636	684	254	29	*c*
Females	*c*	*c*	*c*	524	424	270	17	*c*
Total ..	6,862	2,476	2,892	1,160	1,108	524	46	*c*

(*a*) Including relieved. (*b*) Included in recovered. In the case of Queensland the totals are exclusive of 210 males and 151 females removed to other institutions. (*c*) Not available.

(v) *Summary for Five Years, 1922 to 1926.* Returns for the last five years of the number of hospitals in Australia, admissions, patients treated, deaths, and expenditure, are given in the following table. Figures for general hospitals only are tabulated, since the working of "special" institutions is not properly comparable with those which treat every class of case.

GENERAL HOSPITALS.—SUMMARY, AUSTRALIA, 1922 TO 1926.

Particulars.	1922.	1923.	1924.	1925.	1926.
Number of institutions ..	424	426	435	450	458
Number of beds	18,969	19,590	19,986	20,718	20,784
Admissions during year ..	209,018	227,168	237,846	251,379	274,537
Indoor patients treated ..	218,209	237,339	249,786	264,311	287,582
Deaths	13,485	14,637	14,784	15,125	15,912
Expenditure .. £	2,441,075	2,632,360	2,800,518	3,090,546	3,404,622

In addition to those admitted to the institutions, there are large numbers of outpatients. The exact number of these cannot be given, but a rough estimate of distinct cases places the total at about 500,000.

(vi) *Revenue and Expenditure.* The revenue and expenditure for the year 1926 were as follow :—

GENERAL HOSPITALS.—REVENUE AND EXPENDITURE, 1926.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Total.
	£	£	£	£	£	£	£	£
Revenue—								
Fees of patients, etc.	211,942	81,460	105,005	76,630	74,559	32,610	700	582,906
Government grants	751,497	106,824	257,662	233,359	107,942	50,476	5,693	1,513,453
Other	663,751	392,453	227,451	54,856	58,344	9,186	..	1,406,041
Total ..	1,627,190	580,737	590,118	364,845	240,845	92,272	6,393	3,502,400
Expenditure—								
Salaries and Maintenance ..	1,037,958	396,865	591,155	234,897	226,274	67,537	4,733	2,559,419
Buildings ..	(*a*)313,450	99,550	37,226	135,675	3,374	3,412	960	593,647
Other	158,821	27,636	24,225	11,503	7,742	21,629	..	251,556
Total ..	1,510,229	524,051	652,606	382,075	237,390	92,578	5,693	3,404,622

(*a*) Exclusive of Government Grants to new hospitals, £23,572.

2. Benevolent and Destitute Asylums.—(i) *General.* There has been a great increase in recent years in the amount of aid provided for the aged. Two elements, each of them independent of the growth of population, have influenced this increase. One is, that the general age of the community has advanced—the large flow of immigration of sixty and seventy years ago having been mostly of persons in the prime of life; the other is the increased regard paid in all British communities to the well-being of the helpless. In Australia numerous establishments have been founded for the housing and protection of persons no longer able to care for themselves. The institutions are supported by Government and municipal aid, public subscriptions, charity performances, bequests, etc.; and in many cases relatives of indigent and afflicted persons contribute to their maintenance.

The impossibility of an entirely satisfactory statistical tabulation in regard to all forms of charitable aid is especially marked in the case of benevolent institutions, since the conditions under which they have been established in the different centres in Australia have resulted in differences in the classes of cases treated by them. For example, in Western Australia, the Home for Destitute Women includes a maternity ward, for which the statistics are not separately kept. Since the chief function of the institution is aid to the destitute, it has been included amongst benevolent asylums. In Victoria, although several of the hospitals were also benevolent asylums, a separation was effected and asylum patients were transferred to appropriate institutions. In South Australia, the Destitute Asylum includes lying-in and children's departments.

(ii) *Principal Institutions.* The principal institutions of this nature in each State are as follows :—

(*a*) *Government Asylums for the Infirm, New South Wales.* There are five asylums for the infirm maintained by the Government—four for men and one for women. Rookwood, the largest of these, had in 1924 an average number resident of 1,485, Newington 707, Liverpool 631, and the Parramatta Homes 459. The State Labour Depot and Refuge at Randwick had 61 inmates.

(*b*) *Benevolent Asylums, Victoria.* Exclusive of the asylums attached to hospitals, there are eight institutions in Victoria. The daily average of indoor patients approaches 2,000, with about 300 distinct cases of outdoor relief. Residents in the Old Colonists Homes in 1926 numbered 88.

(*c*) *Benevolent Asylums, Queensland.* There are four institutions in Queensland, with 1,224 beds. The most important of these is at Dunwich (Stradbroke Island), and there are small institutions at Nundah, Rockhampton, and Toowoomba. The inmates of the four institutions in 1926 numbered about 1,700.

(*d*) *Homes for Aged, South Australia.* At the Old Folks' Home, Magill, there were 450 inmates at the end of 1926, and 78 in the Aged Men's Home, Beaumont.

(*e*) *Homes for the Destitute, Western Australia.* There are two homes in Western Australia supported by public funds. The Old Men's Home at Claremont had 611 inmates at the end of 1926, and the Women's Home, Fremantle, which receives children also, had 93 adult inmates.

(*f*) *Charitable Establishments, Tasmania.* There are two principal Government charitable establishments in Tasmania. The New Town Infirmary and Consumptive Home had 230 beds, and the Home for Invalids, Launceston, had 31 beds in 1926.

(iii) *Revenue and Expenditure.* Details regarding revenue and expenditure for the year 1926 are given in the following table :—

BENEVOLENT ASYLUMS.—REVENUE AND EXPENDITURE, 1926.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
	£	£	£	£	£	£	£
Revenue—							
Government aid ..	150,702	33,495	52,462	19,316	9,750	10,290	276,015
Municipal aid ..	..	881	..	..	..	...	881
Public subs., legacies, etc.	1,736	16,884	251	60	..	..	18,931
Fees	14,368	23,142	..	3,904	13,189	4,876	59,479
Other	4,257	9,896	3,016	395	..	1,291	18,855
Total ..	171,063	84,298	55,729	23,675	22,939	16,457	374,161
Expenditure—							
Buildings	2,533	5,100	74	3,159	..	269	11,135
Maintenance	162,756	64,330	54,996	14,956	23,939	12,806	333,783
Other	6,255	5,092	447	6,154	..	3,382	21,330
Total ..	171,544	74,522	55,517	24,269	23,939	16,457	366,248

3. Orphanages, Industrial Schools, etc.—(i) *General.* The organization of charitable effort varies greatly in regard to orphans and waifs. In many institutions, shelter and some form of industrial training are offered to destitute children of all classes whether orphans or not, while some of those styled orphanages do not confine their relief strictly to orphans. The expenditure on orphanages in 1926 was approximately £200,000.

(ii) *Principal Institutions.* The principal institutions in each State are as follows :—

(*a*) *New South Wales.* The care of destitute and neglected children is entrusted to the State Children's Relief Board, whose officers supervise the welfare of the children and the treatment of them by those to whom they are boarded out. Provision is made for instruction in various trades and callings.

There are also orphanages, farm homes, country homes for children, etc., with upwards of 2,000 children under care.

There are several reformatories and industrial schools maintained by the State. At the Industrial School and Training Home for Girls there were on 31st December, 1925, 130 pupils. At the Farm Home for Boys, Gosford, there were 111 on the roll at the end of the year.

(*b*) *Victoria.* There are ten orphanages in Victoria, with 1,726 beds. The daily average number of inmates in 1925–26 was 1,688. The expenditure in the same year was £78,248.

At the end of 1926 there were two industrial and four reformatory schools in the State. Of these, one in each class is wholly controlled by the Government, being used merely as a receiving and distributing depot. The children are sent thence to situations, foster homes, or other institutions dealing with State wards. The other schools are under private management, receiving an allowance for State wards. Many of the reformatory children are placed with friends, or licensed out.

(*c*) *Queensland.* There are twelve orphanages in Queensland. The number under care during 1926 was about 2,000, and the expenditure for the year, £32,000.

There are also four industrial and reformatory schools with about 90 boys and 40 girls under detention.

(*d*) *South Australia.* At the end of the year 1926 the inmates in Neglected Children's Homes numbered 367, in orphan asylums 252, and in reformatories 103. The committals to these institutions during the last five years averaged 370.

(*e*) *Western Australia.* In Western Australia there were, at 30th June, 1927, thirteen institutions classed as orphanages, industrial schools, etc., containing 394 boys and 257 girls. There were also 26 boys and 18 girls at the Government Receiving Depot.

(*f*) *Tasmania.* There are four industrial schools and one orphanage in the State. The average daily number of inmates was 187. The Boys' Training Home had 62 inmates at the end of 1926.

(iii) *Transactions of State Departments.* The following table summarizes the transactions in 1926 of State Departments for the relief of neglected children :—

STATE RELIEF OF NEGLECTED CHILDREN.—SUMMARY, 1926.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Number of children in institutions, boarded out, or on probation—							
Males	3 070	3,780	1,391	738	506	270	9,755
Females	2,606	3,133	1,033	540	426	253	7,991
Total ..	5,676	6,913	2,424	1,278	932	523	17,746
Number of children boarded out with their own mothers and female relatives not included in above figures							
Males ..	10,014	8,532	2,826	153	209	..	24,695
Females ..			2,635	136	190	..	
Total ..	10,014	8,532	5,461	289	399	..	24,695
Total children under State control ..	15,690	15,445	7,885	1,567	1,331	523	42,441
	£	£	£	£	£	£	£
Gross cost to State of children's relief ..	584,037	366,836	206,513	51,396	26,899	16,077	1,251,758
Receipts, from parents' contributions, etc. ..	17,928	17,968	12,788	5,260	5,429	1,473	60,846
Net cost ..	566,109	348,868	193,725	46,136	21,470	14,604	1,190,912

4. **Lepers.**—Isolation hospitals for the treatment of lepers have been established in New South Wales (Little Bay); Queensland (Peel Island, near Brisbane); Western Australia (near Cossack); and the Northern Territory (near Darwin). At the end of 1927 there were 17 cases in residence at Little Bay, 73 at Peel Island, 7 in Western Australia, and 13 in North Australia. In the three years 1925 to 1927 a total of 44 cases of leprosy was reported in Australia, of which 33 were recorded in Queensland and 9 in Western Australia. In 1925 there were 2 deaths in Queensland, and in 1926 there were 6 deaths from this disease, 4 in Queensland, 1 in New South Wales, and 1 in North Australia.

5. **Hospitals for the Insane.**—(i) *General.* The method of compiling insanity statistics has been fairly uniform throughout the States, but differences in diagnosis of the early stages of the disease introduce an element of uncertainty which considerably affects the value of comparisons.

(ii) *Hospitals, Staff, etc., 1926.* Particulars regarding the number of institutions, medical and nursing staff, and accommodation are given in the appended table for the year 1926 :—

HOSPITALS FOR THE INSANE.—NUMBER, STAFFS, ACCOMMODATION, 1926.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
Number of institutions—							
Government	11	8	3	1	3	1	27
Private	2	(*c*) 4	..	..	1	..	7
Total	13	12	3	1	4	1	34
Medical Staff —							
Males	22	26	6	4	4	2	64
Females	2	..	1	..	..	..	3
Total	24	26	7	4	4	2	67
Nursing Staff and Attendants—							
Males	772	681	266	90	131	63	2,003
Females	728	636	207	86	80	71	1,808
Total	1,500	1,317	473	176	211	134	3,811
Accommodation—							
Number of dormitories ..	(*a*)	1,313	566	488	44	419	(*d*)
Capacity, in cubic feet ..	(*a*)	3,921,380	2,046,916	858,423	714,714	896,680	(*d*)
Number of beds	7,235	5,555	2,828	1,333	1,186	748	18,885
Cubic feet to each bed ..	(*b*) 800	706	723	644	605	1,251	(*d*)

(*a*) Not available. (*b*) Ordinary, 600; hospital, 1,000. (*c*) Cases at the end of the year numbered 96: other particulars not available. (*d*) Incomplete.

(iii) *Patients, 1926.* Information regarding patients treated, deaths, etc., for the year 1926 is given in the table hereunder :—

HOSPITALS FOR THE INSANE.—PATIENTS, DEATHS, ETC., 1926.

Particulars.	N.S.W.	Vic.(*a*)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Admissions and re-admissions during year—							
Males	894	434	280	129	124	52	1,913
Females	676	407	199	120	83	54	1,539
Total	1,570	841	479	249	207	106	3,452
Discharges—Recovered—							
Males	303	79	154	37	23	12	608
Females	304	90	98	34	19	18	563
Total	607	169	252	71	42	30	1,171
Relieved and unrelieved—							
Males	84	62	17	28	16	9	216
Females	73	61	10	29	18	14	205
Total	157	123	27	57	34	23	421

(*a*) Exclusive of four private licensed houses.

HOSPITALS FOR THE INSANE.—PATIENTS, DEATHS, ETC., 1926—*continued.*

Particulars.	N.S.W.	Vic.(*a*)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Absconders not retaken—							
Males	20	7	..	1	..	..	28
Females	1	2	..	..	..	..	3
Total	21	9	..	1	..	..	31
Deaths—							
Males	369	208	168	74	41	27	887
Females	243	195	67	39	14	14	572
Total	612	403	235	113	55	41	1,459
Number of patients on books at end of year—							
Males	4,730	3,055	1,847	696	772	307	11,407
Females	3,840	3,274	1,153	586	392	308	9,553
Total	8,570	6,329	3,000	1,282	1,164	615	20,960
Average daily number resident—							
Males	4,498	2,626	1,870	701	777	305	10,777
Females	3,554	2,841	1,099	579	362	305	8,740
Total	8,052	5,467	2,969	1,280	1,139	610	19,517
Number of patients on books at end of year per 1,000 of population—							
Males	3.94	3.58	3.97	2.38	3.80	2.89	3.65
Females	3.33	3.81	2.77	2.14	2.23	2.84	3.20
Persons	3.64	3.70	3.40	2.26	3.07	2.86	3.43
Average number of patients resident in hospitals for insane per 1,000 of mean population—							
Males	3.79	3.11	4.05	2.43	3.86	2.90	3.49
Females	3.12	3.33	2.66	2.14	2.08	2.87	2.95
Persons	3.46	3.22	3.39	2.29	3.04	2.89	3.23

(*a*) Exclusive of four private licensed houses.

In some States persons well advanced towards recovery are allowed to leave the institutions and reside with their relatives or friends, but they are under supervision and their names are kept on the books. The figures for admissions, etc., include absconders captured and re-admitted. Generally, very few escapees succeed in avoiding capture.

(iv) *Summary for Australia, 1922 to 1926.* The table hereunder gives a summary for hospitals for the insane in Australia for each of the five years 1922 to 1926. Licensed houses (except as regards expenditure) are included in the totals for New South Wales and Victoria. The figures are exclusive of reception houses, and observation wards in gaols. In the case of New South Wales the expenditure figures include cost of Broken Hill patients treated in South Australian hospitals :—

HOSPITALS FOR THE INSANE.—SUMMARY, AUSTRALIA, 1922 TO 1926.

Particulars.	1922.	1923.	1924.	1925.	1926.
Number of institutions	36	35	35	36	34
Number of beds	18,047	18,303	18,387	18,797	18,885
Admissions	3,226	3,342	3,325	3,441	3,452
Discharged as recovered, relieved, etc.	1,648	1,691	1,638	1,613	1,592
Deaths	1,267	1,433	1,413	1,416	1,459
Expenditure .. .. £	1,303,907	1,401,459	1,494,025	1,649,626	1,629,242

(v) *Number of Insane, 1922 to 1926.* The proportion of insane, as well as the total number returned as under treatment, has changed very little during recent years. The next table gives the number of insane under official care in Australia and the proportion per 1,000 of population for the last five years.

INSANE PERSONS IN INSTITUTIONS, 1922 TO 1926.

State.	1922.	1923.	1924.	1925.	1926.
			NUMBER.		
New South Wales	7,991	8,112	8,231	8,397	8,570
Victoria	5,997	6,026	6,096	6,192	6,329
Queensland	2,842	2,869	2,983	2,983	3,000
South Australia	1,224	1,248	1,248	1,302	1,282
Western Australia	1,079	1,066	1,047	1,088	1,164
Tasmania	599	608	618	603	615
Total	19,732	19,929	20,223	20,565	20,960
			PER 1,000 OF POPULATION.		
New South Wales	3.93	3.67	3.65	3.65	3.64
Victoria	3.77	3.71	3.68	3.67	3.70
Queensland	3.61	3.54	3.57	3.46	3.40
South Australia	2.39	2.38	2.30	2.36	2.26
Western Australia	3.15	3.00	2.87	2.92	3.07
Tasmania	2.74	2.78	2.84	2.78	2.86
Australia	3.61	3.47	3.44	3.43	3.43

For the period embraced in the tables Victoria and New South Wales show the highest rate of insanity, roughly 1 in 270 persons. It is stated that this is chiefly owing to the proportionately greater number of the aged in those States. On the other hand, in South Australia a considerably lower insanity rate has prevailed, averaging about 1 in 430, Tasmania being next with an average of about 1 in 360.

A more rational attitude towards the treatment of mental cases has resulted in a greater willingness in recent years to submit afflicted persons to treatment at an earlier stage. Hence an increase in the number of recorded cases does not necessarily imply an actual increase in insanity, and the small increment in the numbers in the first of the immediately preceding tables is probably, if not solely, due to this circumstance.

(vi) *Causes of Insanity.* The proportion of causes of insanity to the total ascertained causes in Australia in the five years 1922 to 1926 shows that hereditary influence has been the chief factor, more than one-fifth of the total ascertained causes coming under this head. Domestic troubles, adverse circumstances, etc., have also been a fruitful source. Cases due to intemperance in drink range from one in 11 to one in 12.

INSANITY.—PERCENTAGE OF CAUSES, AUSTRALIA, 1922 TO 1926.

Causes, Previous History, etc.	1922.	1923.	1924.	1925.	1926.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Domestic trouble, adverse circumstances, mental anxiety	12.6	11.4	13.1	15.0	11.6
Intemperance in drink	8.9	9.4	8.0	8.4	9.1
Hereditary influence, ascertained; congenital defect, ascertained	21.8	22.9	24.6	22.8	18.5
Pregnancy, lactation, parturition and puerperal state, uterine and ovarian disorders, puberty, change of life	7.6	7.0	8.4	7.1	7.1
Previous attacks	12.4	13.6	12.9	11.4	12.5
Accident, including sunstroke	1.3	1.5	1.3	1.2	1.0
Old age	11.7	11.1	10.8	10.1	10.2
Venereal disease	3.3	5.2	5.5	5.8	6.1
Other causes ascertained	20.4	17.9	15.4	18.2	23.9
All ascertained causes	100.0	100.0	100.0	100.0	100.0

(vii) *Length of Residence in Hospital.* (*a*) *New South Wales.* Particulars are not available regarding the average length of residence in hospitals during the year of persons who died or were discharged. There are four State Reception Houses, where suspected persons are confined for observation, being subsequently either discharged or transferred to lunatic asylums. In one of the gaols, observation wards have been instituted with similar functions.

(*b*) *Victoria.* Particulars are not available as to the average length of residence in hospitals during the year of persons who died or were discharged. There are lunacy wards in two of the general hospitals; also a State receiving house where persons are placed for observation, and subsequently discharged or transferred to asylums.

(*c*) *Queensland.* The average residence in the institutions of those who died during the year was 6 years 357 days for males and 6 years 235 days for females; and of those who were discharged, 1 year 135 days for males and 1 year 27 days for females. There are three reception houses for observation of the insane.

(*d*) *South Australia.* The average residence of those who died was 5 years 6 months and 9 days for males, and 4 years 3 months and 11 days for females; of those discharged, 1 year 7 months and 19 days for males, and 1 year 7 months and 19 days for females.

(*e*) *Western Australia.* The period of residence of those who died during the year averaged 5 years 1 month and 17 days for males, and 5 years 5 months and 12 days for females; of those who were discharged, 1 year 11 months and 26 days for males, and 2 years 4 months and 22 days for females.

(*f*) *Tasmania.* The period of residence of those who died was 8 years 6 months and 3 days for males, and 8 years 8 months and 1 day for females; that of those discharged, 5 months and 6 days for males, and 2 years and 2 months for females.

(viii) *Revenue and Expenditure, 1926.* The revenue of Government asylums is small in comparison with their cost, and consists chiefly of patients' fees. The proportion of expenditure borne by the State amounts to about 87 per cent.

HOSPITALS (GOVERNMENT) FOR THE INSANE.—FINANCES, 1926.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	£	£	£	£	£	£	£
Revenue (Exclusive of Government Grants)—							
Fees of Patients ..	85,964	57,378	31,507	16,767	14,980	7,225	213,821
Other	2,795	5,411	1,245	797	3,536	135	13,919
Total	88,759	62,789	32,752	17,564	18,516	7,360	227,740
Expenditure—							
Salaries	379,451	275,594	129,257	42,354	61,848	30,210	918,714
Maintenance	242,036	180,291	86,281	40,328	..	21,442	570,378
Buildings	..	41,542	8,368	7,375	..	681	57,966
Other	35,291	6,659	..	244	39,925	65	82,184
Total	656,778	504,086	223,906	90,301	101,773	52,398	1,629,242

6. Care of the Feebleminded.—An account of the treatment of the feebleminded, supplied by the Public Health Department of Tasmania, appeared in Official Year Book No. 19, pp. 477 and 478. Considerations of space, however, preclude its repetition in the present volume.

7. Protection of Aborigines.—For the protection of the aboriginal Australian race there are institutions, under the supervision of Aborigines Boards, where the blacks are housed and encouraged to work, the children receiving elementary education. The work is usually carried on at mission stations, but many of the natives are nomadic, and receive food and clothing when they call, whilst others but rarely come under the notice of the Boards. The native race is extinct in Tasmania. The expenditure from Consolidated Revenue in 1926–27 was, New South Wales, £28,000; Victoria, £6,700; Queensland, £50,000; South Australia, £28,000; Western Australia, £30,000; Northern Territory, £10,000; total for Australia, £153,000. In New South Wales the number of full-bloods receiving aid in 1926 was 394, and of half-castes, 1,272. The total numbers of those living on reserves were full-bloods, 424, and half-castes, 1,958. At the 30th June, 1926, there were 55 full-bloods and 282 three-quarter and half-castes under the care of the Aborigines Protection Board at the chief station in Victoria. In Queensland in 1926 there were more than 3,500 aboriginals at the various stations. At the 30th June, 1926, there were 750 inmates, of whom 140 were full-bloods, at mission stations in South Australia, while in Western Australia the adult aborigines and half-castes in the native institutions in the year 1926 numbered 596. At the mission stations in the Northern Territory about 1,500 were in residence, but casual assistance and medical attendance are given to large numbers of natives every year.

8. **Royal Life Saving Society.**—In each of the State capitals, "centres" of the Royal Life Saving Society have been established. Life preservation is the object of the Society, and its immediate aims are (*a*) educative and (*b*) remedial. The encouragement of swimming and life-saving in schools, colleges, clubs, etc., will bring about a more widespread knowledge of these necessary matters, and there is increasing provision of life-belts, reels, lines, and other first-aid appliances on ocean beaches, wharves, and other suitable places. Upwards of 3,000 certificates of proficiency in various grades are issued annually after examination.

9. **Royal Humane Society.**—The Royal Humane Society of Australasia has for its objects (*a*) to grant awards for skill, promptness, and perseverance in life saving; (*b*) to provide assistance in cases of danger and apparent death; (*c*) to restore the apparently drowned; (*d*) to collect and circulate the latest information regarding approved methods and apparatus for life saving. Awards of medals and certificates are made numbering about 100 annually. Upwards of 350 lifebuoys have been provided at various places on the coasts, rivers, lakes, and reservoirs in the various States. Swimming is encouraged amongst school children, and awards are made for proficiency.

10. **Other Charitable Institutions.**—Owing to variety of name and function of other charitable institutions it has been found impracticable to give detailed results. The aid given in kind—food, clothing, tools of trade, etc.—is considerable, whilst the shelter and treatment afforded range from a bed for a night for casual callers in establishments ministering minor charity, to indoor treatment over long periods in those that exist for the relief of the aged and infirm. The institutions not so particularized include asylums for the deaf, dumb, and blind, maternity institutions and infant homes, homes for the destitute and aged poor, industrial colonies, night shelters, crèches, homes of hope, rescue homes, free kindergarten and ragged schools, auxiliary medical charities, free dispensaries, benevolent societies and nursing systems, ambulance and health societies, boys' brigades, humane and animals' protection societies, prisoners' aid associations, shipwreck relief societies, bush fires and mining accident relief funds, etc.

11. **Total Expenditure on Charities.**—The table below gives the total expenditure on charities in each of the last five years, the figures for the various States being compiled, as far as possible, on the same basis. For the reason given in § 1. 1. the cost of old-age and invalid pensions and of maternity allowances is not included:—

TOTAL EXPENDITURE ON CHARITIES, 1922 TO 1926.

State or Territory.	1922.	1923.	1924.	1925.	1926.
	£	£	£	£	£
New South Wales	2,532,039	2,754,759	2,941,515	3,230,625	3,452,596
Victoria	1,521,278	1,488,058	1,653,974	1,944,306	2,064,028
Queensland	975,028	991,753	991,753	1,145,535	1,190,863
South Australia	551,596	546,528	621,315	679,088	766,513
Western Australia	457,661	468,179	508,809	534,522	551,616
Tasmania	216,580	215,494	228,246	237,834	235,169
Northern Territory	5,585	6,625	5,330	3,162	4,309
Total	6,259,767	6,471,396	6,950,942	7,775,072	8,265,094

The figures include expenditure from Government and private sources of all institutions and societies affording relief, for which particulars are available.

CHAPTER XII.

PUBLIC HYGIENE.

§ 1. Public Health Legislation and Administration.

1. **General.**—(i) *Commonwealth.* The Commonwealth Department of Health, which was created on the 3rd March, 1921, and commenced its administration as from the 7th March, 1921, is controlled by the Commonwealth Minister for Health. The Department was formed by the extension and development of the Commonwealth Quarantine Service, the Director of Quarantine becoming the Commonwealth Director-General of Health and Permanent Head of the Department.

The functions of the Department are as follows :—

> The administration of the Quarantine Act : The investigation of causes of disease and death and the establishment and control of laboratories for this purpose : The control of the Commonwealth Serum Laboratories and the commercial distribution of the products manufactured in those laboratories : The methods of prevention of disease : The collection of sanitary data, and the investigation of all factors affecting health in industries : The education of the public in matters of public health : The administration of any subsidy made by the Commonwealth with the object of assisting any effort made by any State Government or public authority directed towards the eradication, prevention, or control of any disease : The conducting of campaigns of prevention of disease in which more than one State is interested : The administrative control of the Australian Institute of Tropical Medicine : The administrative control of infectious disease amongst discharged members of the Australian Imperial Forces : The study of the behaviour of communicable diseases throughout the world and acting as an intelligence bureau for the collection and dissemination of information : The control of venereal disease and infectious diseases in the Mercantile Marine : The inspection of vessels, and the medical inspection of seamen under the Navigation Act : The control of the importation of food and drugs under the Commerce Act : Generally to inspire and co-ordinate public health measures : Any other functions which may be assigned to it.

As noted above, the Department controls the Australian Institute of Tropical Medicine at Townsville, and it directs the campaign in connexion with hookworm disease. These matters, together with the control exercised by the Department over malaria and bilharziasis introduced by returned soldiers and sailors, are dealt with separately in subsequent pages in this chapter (see § 5). Reference to the Commonwealth Serum Laboratories will be found in § 4, 5.

(ii) *New South Wales.* The Department of Public Health is controlled by the Minister of Public Health. The Director-General of Public Health is the chief executive officer, and is assisted by various staffs—medical, bacteriological, chemical, veterinary, dairy inspection, meat inspection, sanitary, pure food, and clerical. The work of the Department extends over the whole of the State, and embraces all matters relating to public health and the general medical work of the Government, the Director-General of Public Health holding the position of Chief Medical Officer of the Government as well as being permanent head of the Department.

The Board of Health has certain statutory duties imposed upon it by various Acts of Parliament, and the Director-General is President of the Board. These duties consist largely in supervision of the work of local authorities (Municipal and Shire Councils), so far as that work touches upon public health matters connected with the following Acts :—Public Health Act 1902, Public Health (Amendment) Acts 1915 and 1921, Dairies Supervision Act 1901, Noxious Trades Act 1902, Cattle Slaughtering and Diseased Animals and Meat Act 1902, Pure Food Act 1908, Private Hospitals Act 1908, and Venereal Diseases Act 1918. The Board further possesses certain powers connected with public health matters under the Local Government Act 1919. The Board of Health is a nominee Board, created in 1881 and incorporated in 1894.

The Director-General of Public Health acts independently of the Board of Health as regards the State hospitals and asylums and the various public hospitals throughout the State which receive subsidies from the Government.

(iii) *Victoria.* In this State the Public Health Acts 1915, 1919, and 1922 are administered by a Commission composed of the Chief Health Officer and six members appointed by the Governor-in-Council. The medical and sanitary staffs of the Commission consist of (*a*) the chief health officer, who is also chairman, (*b*) nine district health officers, (*c*) chief sanitary engineer and assistant sanitary engineer, three building surveyors and four building inspectors, and (*d*) twelve health inspectors. The main function of the Commission is to enforce the execution of the Health Acts by the local municipalities, but it has been found advisable to supplement this supervisory function by an active policy of inspection of the sanitary condition of various districts, and the sampling of articles of food. The supervision of the sanitary conditions of milk production is under the Dairy Supervision Branch of the Department of Agriculture, but distribution is supervised by the Commission. Acts administered by the Department of Public Health are :—The Health Acts (in which are now included the Adulteration of Wine Act, the Pure Food Act, the Meat Supervision Act) and the Cemeteries Act, which includes the Cremation Act. The Department administers also the Midwives Act, the Goods Act, the Venereal Diseases Act, the Infectious Diseases Hospital Act, the Heatherton Sanatorium Act, the Masseurs Act, and the Nurses Registration Act.

(iv) *Queensland.* The Public Health Acts 1900 to 1922 are administered by the Commissioner of Public Health under the Home Secretary. The executive staff of the Department includes a health officer, a medical officer for the tuberculosis bureau, five part-time medical officers for venereal diseases, twelve food and sanitary inspectors, and one staff nurse. There is, in addition, a rat squad in Brisbane. Northern offices, in charge of inspectors, are located at Rockhampton, Townsville, Cairns, Mackay and Cloncurry, whilst inspectors are stationed at Toowoomba and Charleville. A laboratory of microbiology, in charge of a bacteriologist, is controlled by the Department, and performs a wide range of microbiological work for the assistance of medical practitioners and the Department.

One function of the Department is to stimulate and advise local sanitary authorities on matters pertaining to the Health Acts, and, where necessary, to rectify or compel rectification, at the cost of the local authority, of sanitary evils produced by local inefficiency or apathy. Its powers and responsibilities were widely increased by the Amending Acts of 1911, 1914, 1917, and 1922.

(v) *South Australia.* The Central Board of Health consists of five members, three of whom (including the chairman, who is permanent head of the Department) are appointed by the Governor, while one each is elected by the city and suburban local Boards and the country local Boards. The Health Act 1898 to 1925 provides that the municipal and district councils are to act as local Boards of Health for their respective districts. There are 197 of these local Boards under the general control and supervision of the Central Board. A chief inspector and one inspector under the Health and Food and Drugs Acts periodically visit the local districts, and see generally that the Boards are carrying out their duties. There is also a chief inspector of food and drugs (under the Food and Drugs Act 1908 to 1926), who, in company with an analyst visits country districts, and takes samples of milk, which are analysed on the spot. There are three nurse inspectors employed in advising and assisting local Boards in connexion with outbreaks of infectious diseases and in carrying out generally similar duties to those of male inspectors, with the exception of certain work under the Food and Drugs Act. In the outlying districts there are fifteen inspectors directly responsible to the Board. The Venereal Diseases Act 1920, which provides for the prevention and control of venereal diseases, has not yet been proclaimed.

(vi) *Western Australia.* The legislation in this State comprises the Health Act 1911, with the amending Acts of 1912 (2), 1915, 1918, and 1919, which have been partly consolidated and reprinted as "The Health Act 1911–19." Further amending Acts were passed in 1920, 1921 and 1926. The central authority is the Department of Public Health, controlled by a Commissioner, who must be a qualified medical practitioner. The local authorities comprise :—(*a*) Municipal Councils, (*b*) Road Boards where the boundaries of a Health District are conterminous with those of a Road District, and (*c*) Local Boards of Health, composed of persons appointed by the Governor. These local Boards are utilized only where neither Municipal Councils nor Road Boards are available. Generally speaking, the Act is administered by the local authorities, but the Commissioner has supervisory powers, also power to compel local authorities to carry out the provisions of the Act. In cases of emergency, the Commissioner may exercise all the powers of a local health authority in any part of the State.

All the usual provisions for public health legislation are contained in the Act, and, in addition, provision is made for the registration of midwifery nurses, the medical examination of school children, the control of public buildings (*i.e.*, theatres, halls, etc.), the control of food, and the provision of standards therefor. The amending Acts of 1915 and 1918 deal exclusively with venereal diseases.

(vii) *Tasmania.* The office of Director of Public Health was established under the Director of Public Health Act 1920, and the person holding the office of Chief Health Officer under the Public Health Act 1903 at the time of the passing of the first-named Act is the Director of Public Health, and is also the permanent head of the Department. The Director has very wide powers, and in the event of the appearance of dangerous infectious disease (small-pox, plague, etc.) in the State, is vested with supreme power, the entire responsibility of dealing with such an outbreak being taken over by him from the local authorities. Local executive is vested in local authorities, who possess all legal requirements for the efficient sanitary regulation of their districts. Controlling and supervisory powers over these bodies are possessed by the Department of Public Health, and many of the powers conferred upon them may be converted into positive duties. One function of the Department is to advise local authorities on matters pertaining to the Health Act, and, where necessary, to rectify sanitary evils produced by local inefficiency or apathy. The Department has three full-time inspectors, who assist and instruct the local sanitary inspectors, but full-time district health officers are not provided for. The number of local authorities under the Public Health Act has been reduced to forty-nine since the Local Government Act 1906 came into force. All parts of Tasmania are now furnished with the administrative machinery for local sanitary government.

The Public Health Acts 1917 and 1918 deal with venereal diseases. Regulations under the Public Health Act 1903, as amended, for checking or preventing the spread of any infectious disease, came into force in February, 1918.

The Places of Public Entertainment Act 1917 is administered by the Director of Public Health under the Minister. This Act provides, *inter alia*, for the licensing and regulation of places of public entertainment, for the appointment of a censor or censors of moving pictures, and for the licensing of cinematograph operators. Comprehensive regulations have been framed under the Act. Inspectors under the Public Health Act 1903, are Inspectors of Places of Public Entertainment under this Act.

§ 2. Inspection and Sale of Food and Drugs.

1. **General.**—Under the Acts referred to later, and the regulations made thereunder, the importation of articles used for food or drink, of medicines, and of other goods enumerated, is prohibited, as also is the export of certain specified articles, unless there is applied to the goods a "trade description" in accordance with the Act. Provision is made for the inspection of all prescribed goods which are imported or which are entered for export.

2. **Commonwealth Jurisdiction.**—Under Section 51 (i) of the Commonwealth Constitution Act 1900, the Commonwealth Parliament has power to make laws with respect to trade and commerce with other countries and among the States. By virtue of that power, the Federal Parliament passed the Commerce (Trade Descriptions) Act 1905, to which reference has already been made in Chapter VI.

3. State Jurisdiction.—The inspection and sale of food and drugs are also dealt with in each State, either under the Health Acts or under Pure Food Acts. This work is carried out in each State by the Executive Officer of the Health Department. There is, in addition, a number of Acts dealing with special matters, such as the adulteration of wine and the oversight of bread and meat supply. The supply and sale of milk are also subject to special regulations or to the provisions of special Acts.

The general objects of these Acts are to secure the wholesomeness, cleanliness, and freedom from contamination or adulteration of any food, drug or article; and the cleanliness of receptacles, places, and vehicles used for their manufacture, storage or carriage. The sale of any article of food or any drug which is adulterated or falsely described is prohibited, as also is the mixing or selling of food or drugs so as to be injurious to health.

Power is given to any authorized officer to enter any place for the purpose of inspecting any article to be used as a food or drug, and to inspect articles being conveyed by road, rail, or water. The officer may take samples for analysis or examination, and may seize for destruction articles which are injurious to health or unwholesome. Special provision is generally made in the Acts with regard to the sale of preservatives and disinfectants.

In every State except Queensland, Advisory Committees have been appointed for the purpose of prescribing food standards, and for making recommendations generally with a view to carrying out the provisions of the Acts. The duty of enforcing these regulations is entrusted to the local authorities.

4. Food and Drug Standardization.—Conferences with the object of securing uniformity in these matters were held in Sydney in 1910, in Melbourne in 1913, in Sydney in 1922 and in Melbourne in 1927. In conformity with the determinations arrived at, each State issued regulations which have had the effect of ensuring uniformity as far as practicable throughout Australia.

5. Sale and Custody of Poisons.—In New South Wales, Victoria, Western Australia and Tasmania, the enactments for regulating the sale and use of poisons are administered by the Pharmacy Boards in the respective States. In South Australia, the sale of poisons is provided for by regulations under "The Food and Drugs Act 1908," administered by the Central Board of Health. In Queensland, the sale of poisons is under the control of the Health Department.

In New South Wales, Victoria, and Tasmania the Government formerly subsidized the Pharmacy Board, in order to enable it to carry out the provisions of the Poisons Act. The subsidy to the Victorian Board was withdrawn in March, 1921, provision having been made for the payment of a 10s. licence fee under the Poisons Act 1920.

No persons, other than legally qualified medical practitioners and registered pharmaceutical chemists, are permitted to sell poisons, without special licences from the bodies administering the legislation in the respective States. These licences are issued to persons in business distant from four to five miles from a registered chemist, on production of certificates from medical practitioners, police, or special magistrates or justices as to the applicant's character and fitness to deal in poisons. Annual licence fees, ranging from 5s. to 40s., are charged. New poisons regulations were approved in Queensland on the 26th November, 1924, amongst which are stringent restrictions on the sale of potassium cyanide. A revised list of standard poisons was gazetted in Western Australia in December, 1922.

In Victoria "The Poisons Act 1927," operative from 1st February, 1928, provides for the control of the sale of potassium cyanide and methylated spirits. The former may legally be bought or sold by licensed persons only. It is made an offence to drink methylated spirits which may be sold only by persons licensed under the "Poisons Acts 1915 or 1920."

Special conditions attaching to the sale of poisons were alluded to on p. 1055 of Official Year Book No. 12.

Partial exemptions from the regulations are made in some States in the case of sales of poisons for agricultural, horticultural and photographic purposes, in so far that any person may sell such poisons subject to the restrictions as to the class of container and the manner in which they may be sold. The sale of what are generally known as industrial poisons—such as sulphuric acid, nitric acid, hydrochloric acid, soluble salts of oxalic acid, formalin, etc.—is governed by regulations, as also is the sale of poisons for the destruction of rats, vermin, etc. Under the existing laws these poisons may, in most of the States, be sold by any one. The Victorian Parliament, in December, 1920, passed an amending Poisons Act, in which the word " wholesale " has for the first time been defined as meaning "sale or supply for the purposes of re-sale," providing for an annual fee of 10s. and the issuing of licences to dealers in exempted poisons. A new principle is introduced into the Victorian Poisons Act of 1920. Certain drugs are declared to be " potent drugs " and may be sold by pharmaceutical chemists only. These drugs include acetanilid, adrenalin, oil of tansy, pituitary extract, thyroid gland preparations, and any serum or vaccine for human use. Under the Victorian " Dangerous Drugs Regulations, 1922," which came into effect on the 1st January, 1923, further restrictions were imposed on the manufacture and sale of abortifacients and of habit-forming drugs such as ergot, morphine, opium, heroin, cocaine, veronal, etc. Regulations regarding dangerous drugs (cocaine, morphia, etc.) are included in the amended Queensland regulations of 26th November, 1924, referred to above. An amending Poisons Act which came into force in Victoria on 1st January, 1926, prohibits the hawking or peddling of poisons, or the distribution of poisons as samples in any street or public place. Magistrates may order the confiscation of opium smoking pipes and paraphernalia in addition to the opium itself. It is made an offence under heavy penalties for any person to obtain narcotic drugs by false representations or to have any morphine, cocaine, medicinal opium, etc. in his possession without lawful authority. A comprehensive act dealing with the sale and distribution of dangerous habit-forming drugs was passed by the New South Wales Parliament early in 1927.

§ 3. Supervision of Dairies, Milk Supply, etc.

1. **General.**—In Official Year Book No. 12 and preceding issues, allusion is made in general terms to the legislation in force in the various States to ensure the purity of the milk supply and of dairy produce generally, but limits of space preclude the repetition of this information in the present issue.

2. **Number of Dairy Premises Registered.**—The following table shows, so far as the particulars are available, the number of dairy premises registered and the number of cattle thereon. Compulsory registration is not in force throughout the whole area of the various States.

DAIRY PREMISES REGISTERED, AND CATTLE THEREON, 1927.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.
Premises registered ..	21,585	21,784	(*a*)22,451	1,347	81	(*b*)
Cattle thereon ..	920,585	289,874	555,519	8,890	1,271	(*b*)

(*a*) Approximate number of dairies operating. (*b*) Not available.

3. **New South Wales.**—The provisions of the Dairies Supervision Act 1901 extend to the whole of the Eastern and Central Divisions and to all important dairying districts further inland. Other districts are brought under the operation of the Act by proclamation from time to time. Every dairyman, milk vendor, and dairy factory or creamery proprietor is required under penalty to apply for registration to the local authority for the district in which he resides, also to the local authority of every other district in which he trades. Registration must be applied for prior to commencing trade, and must be renewed annually. The Chief Dairy Inspector is in charge of all inspectorial work under the Dairies Supervision Act 1901, and has assisting him fifteen qualified dairy inspectors, each in charge of a district.

4. **Victoria.**—The registration, inspection and supervision of dairies, dairy farms, dairy produce, milk stores, milk shops, milk vessels, dairy cattle and grazing grounds are provided for by the Dairy Supervision Act 1915, and the Milk Supply Act 1922, administered by the Minister of Agriculture. The supervision of butter and cheese factories is provided for by the Dairy Produce Act 1919. Under the Health Act, however, the Department of Public Health is empowered to take samples of food (including milk, cream, butter, cheese, and other dairy products) for examination or analysis, and to institute prosecutions in case of adulterated or unwholesome food. By the end of the

year 1926, 122 municipal districts, comprising almost one-half of the area of the State, had been brought under the operation of the Dairy Supervision Act. The municipal councils have the option of carrying out the administration of the Act, or of deciding that the work should devolve upon the Department of Agriculture; up to the present all the municipalities in which the Act has been proclaimed have elected for departmental administration.

The Milk Supply Act 1922 provides for the appointment of a Milk Supply Committee with power to issue regulations to govern the milk supply of the metropolis, and to disseminate information concerning the best methods of handling the product.

The Council of any metropolitan municipality, or a group of councils acting together, may establish depots at which milk may be brought, treated, and sold. The Committee may, however, issue certificates authorizing persons to sell milk, but, in an area in which there is a municipal depot, no milk may be sold unless it has been treated in a depot or, by approved methods, in a factory. Milk sold in containers must have the grade specified on the label. A laboratory has been established to undertake the bacteriological examination of the milk purveyed and generally to carry out researches in matters relating to the milk supply.

5. **Queensland.**—The control and supervision of the milk supply, of dairies, and of the manufacture, sale, and export of dairy produce are provided for by the Dairy Produce Act 1920, administered by the Department of Agriculture and Stock. This Act and the regulations made thereunder apply only to prescribed areas which comprise the whole of the coastal district from Rockhampton down to the New South Wales border, and the Darling Downs, Maranoa, Mackay, and Cairns districts. In certain proclaimed areas the sale of milk is restricted to persons registered under the Dairy Produce Act 1920, licensed under the Milk Sellers' Regulations of 1924 administered by the Department of Public Health. Milk for sale is supervised by inspectors of the Health Department under the Health Acts 1900–1922. During the year ended 30th June, 1926, 941 samples of milk were analysed, and 300 samples were bacteriologically tested.

6. **South Australia.**—The Food and Drugs Act 1908, and the Regulations made thereunder, provide for the licensing of vendors of milk, and the registration of dairies, milk stores and milk shops. The Metropolitan County Board carries out the requirements of the metropolitan area. In the country, the majority of local authorities have not made statutory provision for the licensing of vendors of milk and the registration of dairy premises, and, in consequence, the Central Board of Health provides for such under the Act.

7. **Western Australia.**—Under the provisions of the Health Act, control of dairies throughout the State is in the hands of the Public Health authorities. The premises of dairymen and milk vendors must be registered by a local authority. The inspectors under the Act supervise the sanitary condition of the premises, the examination of herds being carried out for the Health Department by officers of the Department of Agriculture. Inspection of herds is made at regular intervals, and the tuberculin test is applied in cases of suspected disease.

8. **Tasmania.**—Local authorities are responsible for the dairies in their respective districts. By-laws for the registration and regulation of dairies have been drafted by the Public Health Department, and in the majority of cases have been adopted by the local authorities. The Food and Drugs Act 1917 provides that the municipal council of every city or municipality shall submit for analysis such samples of food or drugs as may be specified by the Chief Officer. The sampling is, in the majority of municipal districts, carried out by the Public Health Department, and particular attention is paid to milk. An Act also provides for the registration and inspection of dairies and other premises where dairy produce is prepared, and regulates the manufacture, sale, and export of such produce.

§ 4. Prevention and Control of Infectious and Contagious Diseases.

1. **General.**—The provisions of the various Acts in regard to the compulsory notification of infectious diseases and the precautions to be taken against the spread thereof may be conveniently dealt with under the headings—Quarantine; Notifiable Diseases, including Venereal Diseases; and Vaccination.

2. Quarantine.*—(i) *General.* The Quarantine Act is administered by the Commonwealth Department of Health, and uniformity of procedure has been established in respect of all vessels, persons, and goods arriving from oversea ports or proceeding from one State to another, and in respect of all animals and plants brought from any place outside Australia. In regard to inter-state movements of animals and plants, the Act becomes operative only if the Governor-General be of opinion that Federal action is necessary for the protection of any State or States ; in the meantime the administration of inter-state quarantine of animals and plants is left in the hands of the States. The Commonwealth possesses stations in each State for the purposes of human and of animal quarantine.

(ii) *Administration of Act.* The administration of the Act in respect of the general division, *i.e.*, vessels, persons, and goods, and human diseases, is under the direct control of the Commonwealth in all States except Tasmania. A medical chief quarantine officer, with assistant quarantine officers, has been appointed in each State. This officer is charged with responsible duties, and is under the control of the Director-General of Health. In Tasmania, the chief health officer of the State acts as chief quarantine officer, and payment is made to the State for his services. The administration of the Act in the Northern Territory has been combined with that of Queensland under the chief quarantine officer for the North-eastern division. The administration of the Acts and Regulations relating to oversea animal and plant inspection and quarantine is carried out by the officers of the State Agricultural Departments acting as quarantine officers.

(iii) *Chief Provisions of Act.* The Act provides for the inspection of all vessels including air-vessels, from oversea, for the quarantine, isolation, or continued surveillance of infected or suspected vessels, persons, and goods, and for the quarantining and, if considered necessary, the destruction of imported goods, animals, and plants. The obligations of masters, owners, and medical officers of vessels are defined, and penalties for breaches of the law are prescribed. Power is given to the Governor-General to take action in regard to various matters by proclamation, and to make regulations, to give effect to the provisions of the Act. Quarantinable diseases include small-pox, plague, cholera, yellow fever, typhus fever, leprosy, and any other disease declared by the Governor-General, by proclamation, to be quarantinable. "Vessel" means "any ship, boat or other description of vessel or vehicle used in navigation by sea or air." "Disease" in relation to animals means certain specified diseases, or "any disease declared by the Governor-General by proclamation, to be a disease affecting animals." "Disease" in relation to plants means "any disease or pest declared by the Governor-General, by proclamation, to be a disease affecting plants." The term "plants" means "trees or plants, and includes cuttings and slips of trees and plants and all live parts of trees or plants and fruit."

(iv) *Proclamations.* The proclamations so far issued specify the diseases to be regarded as diseases affecting animals and plants ; appoint first ports of landing for imported animals and plants, and first ports of entry for oversea vessels ; declare certain places beyond Australia to be places infected or places to be regarded as infected with plague ; prohibit the importation (*a*) of certain noxious insects, pests, diseases, germs, or agents, (*b*) of certain goods likely to act as fomites, and (*c*) of certain animals and plants from any or from certain parts of the world ; fix the quarantine lines, and define mooring grounds in certain parts of Australia.

(v) *Miscellaneous.* At present, instead of all oversea vessels being examined in every State, as was formerly the case, those arriving from the east and west are now examined only at the first port of call, and pratique is given for the whole of the Commonwealth except in cases of suspicious circumstances, while vessels arriving from the northern routes are examined only at the first and last ports. Restrictions placed upon oversea vessels are being removed as the machinery of quarantine is improved. The present freedom from certain diseases which are endemic in other parts of the world would, however, appear to justify the Commonwealth in adopting precautionary measures not perhaps warranted in the already infected countries of the old world.

3. Notifiable Diseases.—A. General.—(i) *Methods of Prevention and Control.* Provision exists in the Health Acts of all the States for precautions against the spread, and for the compulsory notification of infectious diseases. When any such disease occurs, the Health Department and the local authorities must at once be notified. In some States notification need only be made to the latter. The duty of giving this notification is generally imposed, first, on the head of the house to which the patient belongs, failing whom on the nearest relative present, and, on his default, on the person in charge of or in attendance on the patient, and on his default, on the occupier of the building. Any medical practitioner visiting the patient is also bound to give notice.

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* From information furnished by the Commonwealth Director-General of Health.

As a rule the local authorities are required to report from time to time to the Central Board of Health in each State as to the health, cleanliness, and general sanitary state of their several districts, and must report the appearance of certain diseases. Regulations are prescribed for the disinfection and cleansing of premises, and for the disinfection and destruction of bedding, clothing, or other articles which have been exposed to infection. Bacteriological examinations for the detection of plague, diphtheria, tuberculosis, typhoid, and other infectious diseases within the meaning of the Health Acts are continually being carried out. Regulations are provided in most of the States for the treatment and custody of persons suffering from certain dangerous infectious diseases, such as small-pox and leprosy.

(ii) *New South Wales.* The proclamation and notification of infectious diseases are dealt with in Part II. of the Public Health Acts 1902 and 1915. Notification of infectious disease must be made to the local authority by the head of the family, etc., and by the medical practitioner. Provision is made for the disinfection or destruction of premises. Restrictions are placed upon the attendance at school of children suffering from infectious disease or residing in a house in which infectious disease exists. Special provisions have been made with regard to typhoid fever, tuberculosis, small-pox and leprosy, and legislation has been passed dealing with venereal diseases.

(iii) *Victoria.* Under the Health Act 1919 any disease may be declared to be notifiable throughout the State. The occupier of a house containing a case of infectious disease, and the medical practitioner in attendance, must report the fact to the Council. The Medical Officer of Health may order the removal of a patient to a hospital when such is available. The occupier of the house must also inform the head teacher of the school of any child suffering from notifiable disease or residing in an infected dwelling. The notification of venereal diseases is dealt with in the Venereal Diseases Act 1916.

(iv) *Queensland.* Part VII. of the Health Act 1900–1922 stipulates that all cases of infectious disease must be notified by the occupier of the house, and the medical practitioner attending the case. Restrictions are placed on the attendance at school of children suffering from a notifiable disease. Special measures must be taken against typhoid, small-pox, and venereal diseases. Leprosy is dealt with under the Leprosy Act 1892.

(v) *South Australia.* Cases of infectious diseases must be reported to the local board, under the provisions of Part VIII. of the Health Act 1898. The duty of notification rests primarily on the head of the family, and, in addition, the medical practitioner must report the case. Children suffering from or resident with a person suffering from an infectious disease must not attend school till they hold a certificate that there is no risk of infection. Venereal diseases will be dealt with under the provisions of the Venereal Diseases Act, 1920 which, however, is not yet in operation.

(vi) *Western Australia.* The Health Acts 1911 to 1922 provide for the notification and control of infectious diseases, including venereal diseases. The occupier of a house containing a case of infectious disease, and the medical practitioner, must report the case to the local authority. Children may not attend school within three months of suffering from any infectious disease unless they possess a certificate of freedom from infection. Special provisions apply to typhoid fever, tuberculosis, and venereal diseases.

(vii) *Tasmania.* The provisions regarding the notification and prevention of infectious diseases are contained in the Public Health Act 1903 and amending Acts. Notification of cases devolves upon the medical practitioner in attendance or the occupier of the house.

(viii) *Diseases Notifiable in each State.* In the following statement diseases notifiable in each State are indicated by a cross:—

DISEASES NOTIFIABLE UNDER THE HEALTH, ETC., ACTS IN EACH STATE.

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.
Acute lobar pneumonia ..	..	..	..	(c)	+	..
Anthrax	..	+	..	+	+	+
Ankylostomiasis	..	+	+	..	..	..
Beri-beri	..	..	..	..	+	..
Bilharziasis	..	+	+	+	+	+
Bubonic plague	+	+	+	+	+	+
Cerebro-spinal fever ..	+	+	+	+	..	..
Cerebro-spinal meningitis ..	+	+	+	+	+	+
Chicken-pox	..	..	..	+	..	..
Cholera	+	+	+	+	+	+
Colonial fever	..	..	..	..	+	..
Continued fever	..	..	+	..	+	..
Dengue fever	..	..	..	..	+	..
Diphtheria	+	+	+	+	+	+
Dysentery..	..	+	+(a)	..	+	..
Encephalitis lethargica ..	..	+	..	..	..	+
Enteric fever	+	+	+	+	+	+
Erysipelas..	..	..	+	+	+	..
Favus	..	..	..	+	..	..
Hæmaturia	..	..	+	..	+	+
Hydatids	..	+	..	..	..	..
Infantile paralysis	+	+	+	+	+	+
Influenza	..	..	..	+(c)	+	..
Leprosy	+	+	+	+	+	+
Low fever	..	..	..	..	+	..
Malarial fever	..	+	+	+	+	+
Malta fever	..	..	..	..	+	..
Measles	..	..	..	+	..	..
Membranous croup ..	+	..	+	+	+	..
Pneumonic influenza ..	..	..	..	+(c)	+	—
Polioencephalitis	..	+	..	..	..	..
Poliomyelitis anterior acuta ..	+	+	+	+	+	+
Puerperal fever	..	+	+	+	+	+
Pulmonary tuberculosis (phthisis)	+(a)	+	+	+	+	+
Pyæmia	..	..	..	..	+	..
Relapsing fever	..	..	+	+	+	..
Scarlet fever	+	+	+	+	+	+
Scarlatina	+	+	+	+	+	+
Septicæmia	..	..	..	+	+	..
Small-pox	+	+	+	+	+	+
Trichinosis	..	..	..	+	..	..
Tuberculosis	..	+	..	+	..	..
Tuberculosis in Animals ..	..	..	..	+	..	..
Typhoid	+	+	+	+	+	+
Typhus fever	+	+	+	+	+	+
Venereal Diseases :—						
Chancroid (soft chancre) ..	+	+	+	+(d)	+	+
Gleet	+	..	..	+(d)	+	..
Gonorrhœa	+	+	+	+(d)	+	+
Gonorrhœal ophthalmia ..	+	..	..	+(d)	+	..
Infective granuloma of the pudenda	+	+	+	+(d)	+	..
Ophthalmia neonatorum ..	..	+	..	..	+	+
Syphilis	+	+	+(b)	+(d)	+	+
Venereal warts	+	..	+	+(d)	+	..
Whooping cough	..	..	..	+	..	..
Yellow fever	+	+	+	+	+	+

(a) Notifiable in certain areas only. (b) Primary and secondary stages only. (c) In South Australia influenza vera is notifiable, and any febrile toxic-septicæmic condition similar to influenza including pneumonic influenza. (d) Act not yet in operation.

B. Venereal Diseases.—(i) *General.* The prevention and control of venereal diseases are undertaken by the States. Each State has a Venereal Diseases Act, or provisions in the Health Act govern the working of the measures taken to combat these diseases. In every State notification has been made compulsory. A list of notifiable forms of venereal complaints is given in the table on the preceding page. Steps have been taken to ensure free treatment by medical practitioners or in subsidized hospitals. Registered pharmaceutical chemists are allowed to dispense prescriptions only when signed by medical practitioners. Clinics have been established, and, in some cases, beds in public hospitals have been set aside for patients suffering from these diseases.

Penalties may be imposed on a patient who fails to continue under treatment. Clauses are inserted in the Acts which aim at preventing the marriage of any patient or the employment of an infected person in the manufacture and distribution of foodstuffs.

The Commonwealth Government has granted a subsidy of £15,000 per annum to the various States to assist in providing hospital treatment and administrative control. The supervision of this work, in so far as it relates to the expenditure of the subsidy, is undertaken by the Commonwealth Department of Health. In February, 1922, a conference was held to consider the means of securing the best results from this subsidy.

The question of Commonwealth assistance has now been taken up by the Federal Health Council. In the Commonwealth Department of Health, a Division of Tuberculosis and Venereal Disease was established in 1927 with a medical officer as Director.

(ii) *New South Wales.* The Venereal Diseases Act, 1918 came into operation on 1st December, 1920. The Act, which is administered by a Commissioner, aims at ensuring that all cases of venereal disease will have immediate and continued treatment. Clinics have been established at subsidized hospitals. Notification is compulsory; a person suffering from the disease is required to place himself under the treatment of a medical practitioner or to attend a hospital within three days of becoming aware of the existence of the disease, and to continue treatment until a cure is effected. During the year ended 30th June, 1927, notifications numbered 5,647. Satisfactory results are being obtained from action taken in cases where patients have been reported for failure to continue treatment as required by the Act. A number of prosecutions—all of which have been successful—has been undertaken for (*a*) sale of drugs prohibited under the Act, (*b*) treatment of venereal disease by a person other than a medical practitioner, and (*c*) for failing to undergo treatment when required.

(iii) *Victoria.* Under the Venereal Diseases Acts 1916 and 1918 the control of venereal disease is undertaken by the Department of Public Health. The Acts provide for compulsory treatment by qualified medical practitioners of all persons suffering from the disease. All hospitals in receipt of State aid treat patients. Three evening and three day clinics have been established at hospitals in Melbourne, and in June, 1918, a special departmental clinic was instituted. Notification of the disease is compulsory, and 5,256 cases were notified in 1927. Between the 17th June, 1918, and 31st December, 1927, 21,079 cases were treated at the special departmental clinic, the attendances numbering 827,863.

(iv) *Queensland.* The Health Act, 1900–1922 confers power on the Commissioner of Public Health to deal with the prevention and control of venereal disease, and affected persons must place themselves under treatment by a medical practitioner. Persons other than medical practitioners are prohibited from treating the disease. Subsidized hospitals are required to make provision for the examination and treatment of cases reported to them, and clinics have been established in Brisbane and ten other towns. Notification is compulsory, and during the year ended 30th June, 1927, 1,319 cases were reported. Visits to the Brisbane clinics numbered 7,513 by males, while by arrangement with the Commissioner of Public Health 76 females received free treatment from medical practitioners. Examination of prostitutes is conducted at Brisbane and thirteen other towns by medical officers appointed under regulation 10 of the Venereal Diseases Regulations of 1923.

(v) *South Australia.* The provisions of the Venereal Diseases Act 1920 (not yet in operation) are to be carried out by the Inspector-General of Hospitals. The Minister administering the Act may arrange with any public hospital to provide free accommodation and treatment, and may also establish hospitals and arrange for free examinations and free supply of drugs. Persons suffering from venereal disease will be compelled to consult a medical practitioner or attend a hospital and place themselves under treatment. No person other than a medical practitioner may attend or prescribe for patients.

(vi) *Western Australia.* The Health Act gives power to the Commissioner of Public Health to deal with venereal diseases, and persons suffering from these diseases must consult a medical practitioner and place themselves under treatment. No treatment may be given except by qualified medical practitioners. Free examination and treatment are given by subsidized hospitals.

(vii) *Tasmania.* The Public Health Act 1917–1918 authorizes the Director of Public Health to take steps for the control of venereal diseases, and persons affected must place themselves under the care of a medical practitioner or of a hospital. The State-aided hospitals are required to provide treatment. During 1927, 376 cases were notified by medical practitioners. In accordance with an agreement between the Commonwealth and the State authorities, the latter have made provision for the free maintenance and treatment of persons suffering from venereal diseases.

4. Vaccination.—(i) *Demand for Vaccine.* In New South Wales there is no statutory provision for compulsory vaccination, though in all the other States such provision has been made. Jennerian vaccine for vaccination against small-pox is prepared at the Commonwealth serum laboratories in Melbourne. A moderate demand exists for the vaccine in Victoria, but in the other States the normal requirements are small. During the years 1912, 1913, and 1914, the output of the vaccine in doses from the dépôt was respectively 65,000, 570,000, and 146,000. The number of doses issued in 1913 was, however, abnormal, and was due to the epidemic of small-pox which broke out in Sydney at the end of June, and was followed by large numbers of vaccinations in each State.

(ii) *New South Wales.* Although there is no provision for compulsory vaccination, public vaccinators have been appointed. No statistics are available as to the proportion of the population which has been vaccinated, but a report of the Principal Medical Officer of the Education Department states that out of 55,740 children medically examined during 1919, 9,487, or 17 per cent., had been vaccinated.

(iii) *Victoria.* Compulsory vaccination, subject to a " conscience " clause, is enforced throughout the State under Part VII. of the Health Act 1919. From the year 1873 up to 31st December, 1918, it is estimated that 72 per cent. of the children whose births were registered were vaccinated. Free lymph is provided. The number of children vaccinated during 1927 was 943, or less than 4 per cent. of the births registered.

(iv) *Queensland.* Although compulsory vaccination is provided for under Part VII. of the Health Act, 1900–1922, its operation has not been proclaimed. Vaccination thus being purely voluntary, medical practitioners do not notify vaccinations.

(v) *South Australia.* The Vaccination Act, 1882, which applies to South Australia and the Northern Territory, is administered by the vaccination officer of the State. Under this Act vaccination was compulsory, but in 1917 an Act to suspend compulsory vaccination was passed. There were only 2 vaccinations reported in 1927.

(vi) *Western Australia.* Vaccination is compulsory under the Vaccination Act, 1878, which, however, remains almost a dead letter, seeing that under the Health Act, 1911, a " conscientious objection " clause was inserted, which is availed of by the majority of parents. The number of children vaccinated is very small. All district medical officers are public vaccinators, but they receive no fees for vaccinations.

(vii) *Tasmania.* All infants are nominally required under the Vaccination Act 1898 to be vaccinated before the age of 12 months, unless either (*a*) a statutory declaration of conscientious objection is made, or (*b*) a medical certificate of unfitness is received. Information in regard to vaccinations in recent years is not available.

5. Commonwealth Serum Laboratories.—The establishment for the preparation of Jennerian Vaccine situated at Royal Park, near Melbourne, formerly known as the " Calf Lymph Dépôt," was in 1918 greatly enlarged by the Commonwealth. The remodelled institution is designated the " Commonwealth Serum Laboratories," and forms a division of the Commonwealth Department of Health. The list of bacteriological preparations produced by the laboratories has been extended to cover a wide range, thus forming a valuable national provision for the protection of public health.

6. Health Laboratories.—The Commonwealth Department of Health has established Health Laboratories at Rabaul in New Guinea, at Lismore in New South Wales, at Bendigo in Victoria, at Townsville, Toowoomba, and Rockhampton in Queensland, at Port Pirie in South Australia, and at Kalgoorlie in Western Australia, and arrangements are being made for the organization of similar laboratories in other parts of Australia.

The laboratory at Rabaul is carried on in conjunction with the hookworm campaign, and is working in close co-operation with the health organization of the New Guinea Administration.

The Bendigo Laboratory was opened in 1922. Besides carrying on the ordinary diagnostic and educational work of a health laboratory, it possesses an X-ray equipment, and undertakes the examination, diagnosis, and treatment of persons suffering from miner's disease and tuberculosis.

The laboratory at Townsville is carried on in conjunction with the Australian Institute of Tropical Medicine at Townsville. The laboratory at Toowoomba was opened on 18th December, 1923.

All of these laboratories are undertaking successfully the diagnostic, educative, and research work for which they were created.

By arrangement between the Commonwealth and Western Australian Governments a special medical survey of persons engaged in the mining industry in Western Australia was carried out in 1925–26 by the Commonwealth Health Laboratory at Kalgoorlie, when 4,067 mine employees were examined.. A further arrangement provides for the re-examination annually of mine employees in the Kalgoorlie district for a period of three years.

7. Industrial Hygiene.—The Industrial Hygiene division of the Commonwealth Department of Health was established in December, 1921. Its objects are the collection of reliable data, the investigation of industrial conditions affecting health, and the issue of advice to employers and employees for the improvement of conditions of work and for the safeguarding of health. Publications have been issued dealing with the scope of industrial hygiene, and with health hazards in industry. Expert advice is available to employers and employees, and it is anticipated that the work of the division will be of great value in guiding the development of industry along hygienic lines, and in improving generally the condition of workers. With a view to the adoption of a concerted scheme of action and a uniform basis for standards and records throughout Australia, conferences of delegates from the State Health and Labour Departments and the Commonwealth Department of Health were held in 1922, 1924 and in 1927.

A special article entitled "Industrial Hygiene in Australia" will be found in Official Year Book No. 18, pp. 522 to 555.

8. Public Health Engineering.—A division of sanitary engineering was established in the Commonwealth Department of Health early in 1923. Investigation has been made into numerous sanitary engineering problems affecting Australia, including a number referred to the Department by various State Governments. Advice is given generally on the protection of water supplies, drainage, and other engineering questions affecting health.

In 1927 a special conference convened by this Division was attended by official representatives of Government and municipal authorities concerned with Health, Water Supply, Sewerage and similar activities. Numerous papers on Public Health problems were read and discussed.

9. Veterinary Hygiene and Plant Quarantine.—In 1927 Directors were appointed to control divisions of the Commonwealth Department of Health, which have been created to deal with veterinary hygiene and plant quarantine.

§ 5. Tropical Diseases.

1. General.—The remarkable development of parasitology in recent years, and the increase in knowledge of the part played by parasites in human and animal diseases, have shown that the difficulties in the way of tropical colonization, in so far as these arise from the prevalence of diseases characteristic of tropical countries, are largely removable by preventive and remedial measures. Malaria and other tropical diseases are coming more and more under control, and the improvements in hygiene which science has accomplished, furnish a new outlook on the question of white settlement in countries formerly regarded as unsuitable for colonization by European races. In Australia, the most important aspect of this matter is at present in relation to such diseases as filariasis, malaria, and dengue fever, which, although practically unknown in southern Australia, occur in many of the tropical and sub-tropical parts.

Systematic attention is being directed to these diseases and to other aspects of tropical hygiene by the Division of Tropical Hygiene of the Commonwealth Department of Health.

2. **Transmission of Disease by Mosquitoes.**—(i) *Queensland.* The existence of filariasis in Queensland was first discovered in 1876. The parasite of this disease is transmitted by *Culex quinquefasciatus* (*Culex fatigans*), the mosquito most prevalent in Queensland. The mosquito *Aëdes aegypti* (*Stegomyia fasciata*), conveyor of yellow fever and of dengue fever, is another common domestic mosquito throughout Eastern Queensland during the summer. Owing to quarantine measures this mosquito has never been infected from abroad with yellow fever, but it has become infected with the virus of dengue fever, and is responsible for a large number of human cases of this disease in the northern part of Australia. Occasional limited outbreaks of malaria occur in the northern parts of the State; one at Kidston, in 1910, resulted in 24 deaths. The infection was traced to newcomers from New Guinea. Allusion to the efforts made to deal with the mosquito, under the Health Act of 1911, will be found in Official Year Book No. 12, p. 1063. By an Order in Council the local authorities are now responsible for the taking of measures for the destruction and the prevention of breeding of mosquitoes.

(ii) *Other States.* In Western Australia it is stated that malaria is not known to exist south of the 20th parallel, while filariasis has never been discovered. Mosquito-borne diseases are unknown in Victoria, South Australia, and Tasmania, except for very rare sporadic cases, and it is stated that filariasis is uncommon in New South Wales, the only cases known being imported ones. Kerosene and petroleum have been successfully used, both by municipalities and private individuals, to destroy larvae of mosquitoes at various places in these States.

(iii) *Northern Territory.* While the Territory is conspicuously free from most of the diseases which cause such devastation in other tropical countries, malaria exists, and, although cases rarely end fatally, the Administration is taking measures for the destruction of mosquito larvae wherever settlements or permanent camps are formed, and precautions are being taken to prevent the collection of stagnant water in such localities.

3. **Control of Introduced Malaria and Bilharziasis.**—(i) *General.* The control of returned soldiers and sailors suffering from malaria and bilharziasis, which was undertaken by the Commonwealth Department of Health at the request of the Departments of Defence and Repatriation, is still being carried out in conjunction with State Health Departments.

(ii) *Malaria.* Steps were taken to have all recrudescences in returned sailors, soldiers, and nurses in all parts of Australia notified direct to the Commonwealth Department of Health by the Medical Officers of the Repatriation Local Committees. Malaria is also notifiable to each State Health Department, except in New South Wales, and particulars of such notifications are transmitted to the Commonwealth Department of Health.

Treatment on intensive lines has been regularly carried out in connexion with malaria recurrences in returned sailors and soldiers in order to effect a cure as rapidly as possible. Steps were also taken to prevent the settlement of malaria-infected individuals in localities such as irrigation areas, where mosquitoes capable of carrying malaria were known to exist.

From information received, it is evident that in the great majority of cases cure has now been established, and that where recrudescences do occur they have been greatly reduced in severity and frequency. The number of foci of infection has been reduced to unimportant dimensions, and the danger of spread of malaria in the community from this source has been practically eliminated.

(iii) *Bilharziasis.* With few exceptions the men who contracted this disease on active service have been brought in from all parts of Australia for expert re-examination and treatment.

Those who have suffered from the disease, and have undergone treatment as indicated above, are still kept under periodical observation, but owing to the success of the measures already taken it is believed that no danger of the spread of infection exists. Action is being taken in the case of a small number of men who have evaded treatment.

4. **Hookworm.**—In 1911, attention was drawn to the necessity for an investigation into hookworm infection in Queensland, and the view was expressed that notified cases did not accurately indicate the prevalence of the disease. Researches made subsequently tended to support this view.

An investigation made in Papua in 1917 by an officer of the International Board of Health of the Rockefeller Foundation disclosed the fact that half of all natives examined were infected with hookworm disease. In co-operation with the Government of Queensland and the Australian Institute of Tropical Medicine, the survey was extended to Queensland, and a considerable number of cases of hookworm infection was found in certain northern coastal areas. In October, 1919, the Australian Hookworm Campaign was begun. This campaign was supported jointly by the Commonwealth, the International Health Board of the Rockefeller Foundation, the State of Queensland, and the other States in which work in this direction was undertaken. By the end of 1922, the survey of Australia and its dependencies had been completed. The total number of examinations up to 30th September, 1924, including those in Dr. Waite's survey in Papua and the earlier work in Queensland, was as follows:—

People examined for hookworm disease	394,578
Found to be infected with hookworms	62,051 (15.7%)

Endemic hookworm infection was found in intermittent areas along the eastern coast of Australia from Cape York to Macksville in New South Wales. The higher summer rainfall in these areas appears to be chiefly responsible for the localization of the infection. It is also found in the vicinity of Broome and Beagle Bay in Western Australia, in the northern part of the Northern Territory, and along the eastern coast of the Gulf of Carpentaria. In the Territory of Papua, 59.2 per cent. of the natives were found to be infected, and in the Territory of New Guinea, 74.2 per cent. There is no endemic hookworm infection in Victoria, South Australia, Tasmania, the interior of Queensland, New South Wales, except the north-eastern part, and Western Australia except the far north.

Metalliferous mines were examined in Victoria, South Australia, New South Wales, Tasmania, and Western Australia, and were found entirely free from hookworm infection. The examination of metalliferous mines in Queensland showed either no infection or a light infection which may have originated chiefly outside the mines. Coal mines in Victoria, Tasmania, and Western Australia were free from infection. Examinations were made in the coal mines of the Newcastle district, and among 1,226 miners examined in about 25 mines only five infected miners were found. In the Ipswich group of coal mines in Queensland, 31.5 per cent. of the miners were infected, and in the Howard-Torbanlea group (Queensland) 75.8 per cent. were infected. Recommendations were made with regard to the correction of the insanitary conditions responsible for these high infection rates.

Wherever operations are carried on by the hookworm campaign, emphasis is placed on the prevention of hookworm disease, in contrast to temporary relief through the cure of existing cases, and much work has been done to improve methods of night-soil disposal, and to teach the people the danger from soil pollution.

In October, 1924, the International Health Board withdrew from the work which was then continued under the direction of the Division of Tropical Hygiene of the Commonwealth Department of Health. From 1st October, 1924, to 30th September, 1927, under the new administration the field units engaged in the investigation examined 112,294 persons, of whom 9,069, or 8.07 per cent., were found to be infected with hookworm.

In the latter part of 1922, the scope of the campaign was widened to include a malaria and filaria survey in co-operation with the Division of Tropical Hygiene, Commonwealth Department of Health. This work is being carried out as opportunity arises.

Both of the species of hookworm which infest man are found in Australia. They differ in ways important to the practical sanitarian, and the need has been recognized for a new and more practicable method of determining their respective distribution. Such a method has been evolved at the Australian Institute of Tropical Medicine, and is being introduced as part of the routine of hookworm control within Australia.

A number of epidemiological and microbiological problems relating to hookworm and other intestinal parasites in tropical and sub-tropical Australia is being investigated by the Australian Institute of Tropical Medicine and the Commonwealth Health Laboratories in Queensland in co-operation with the work of the field units. It is anticipated that useful information will be obtained in regard to the control of hookworm among white people in the tropical and sub-tropical regions of Australia.

5. Australian Institute of Tropical Medicine, Townsville.—The Australian Institute of Tropical Medicine was founded at Townsville in January, 1910. Since 7th March, 1921, the Institute has been administered by the Commonwealth Department of Health. A full account of the activities of this Institute from its foundation up to 1922 will be found in Official Year Book No. 15, pp. 1010–1012.

Since 1922 a number of investigations has been carried out, including the physiology of white populations in the tropics, sociological survey of certain tropical areas of Queensland, the destruction of mosquito larvæ and the control of mosquitoes in the larger centres of population, tropical diseases among the aboriginals on Palm Island, leprosy among aboriginals in the Northern Territory, prevalence of filariasis in Cairns, Yarrabah Mission Station, Port Douglas, Mossman, and Innisfail, and reputed foci of malaria in tropical Queensland. Courses of instruction in tropical medicine and hygiene commence in May of each year, and continue for four months, and ten publications dealing with various aspects of tropical medicine, etc., have been issued.

6. Royal Commission on National Health.—This Royal Commission, which was appointed by the Commonwealth Government in December, 1924, submitted its report on 9th December, 1925. The report deals with and contains recommendations on the following subjects :—Ill-health in the Commonwealth ; medical services ; co-operation of Commonwealth and State health authorities ; prevention of disease ; venereal diseases ; uniform legislation with regard to the purity of food and drugs ; maternity hygiene ; child welfare ; industrial hygiene ; encouragement and development of research work ; relationship between public health authorities and medical practitioners, and between public health authorities and other public authorities rendering medical services ; and the publication of information relating to public health.

The report was considered by a Conference of Ministers of Health of the Commonwealth and States of Australia in July, 1926. The Conference accepted generally the recommendations of the Royal Commission ; adopted specially the recommendation with respect to the creation of a Federal Health Council with functions as specified by the Royal Commission ; and referred the recommendations of the Royal Commission to the Council as the general policy to be followed.

The Federal Health Council, consisting of the principal medical officer in the Departments of Health of the Commonwealth and States, with two additional officers from the Commonwealth Department of Health nominated by the Minister, was constituted by the Federal Government in November, 1926.

The first session of the Council was held in January, 1927, when a series of resolutions was adopted with the view of carrying into effect many of the recommendations of the Royal Commission for securing co-operation between the Health authorities of the Commonwealth and State, for promoting uniformity of legislation and administration, and for advancing public health generally within the Commonwealth.

Action is now being taken with respect to the resolutions of the Federal Health Council and as a further result two new divisions have been created within the Commonwealth Department of Health, viz., Division of Tuberculosis and Venereal Disease, and Division of Epidemiology, and medical officers have been appointed as Directors of each Division.

7. Travelling Study Tours under the League of Nations.—The Health Organization of the League of Nations has, during the past three years, arranged a series of study tours for medical officers of health of various countries, with resultant benefit by reason of interchange of views to those who have taken part in them. For the purposes of enabling officers to gain experience in public health methods, the Commonwealth Government was invited to nominate representatives for two such tours in 1925, one for three months' travel in Western Europe, and the other for a six weeks' visit to Japan and the neighbouring Asiatic countries.

For the tour in Japan and neighbouring Asiatic countries the Director of Tropical Hygiene in the Commonwealth Department of Health was nominated, and this officer during the latter part of 1925 visited Japan and took part in the conference of Medical Officers held at Tokio. Several other places of interest to Australia from the public health standpoint were visited, including Korea, Manchuria, Shanghai, and Manila, and much valuable information was accumulated.

The Director of the Division of Marine Hygiene in the Commonwealth Department of Health visited Europe during the latter part of 1925, and studied public health methods and administration in various countries.

An offer from the League of Nations of two further tours to officers of the Department of Health for the purpose of studying laboratory methods and administration in Western Europe and England was accepted by the Commonwealth Government for the year 1926. The Director and Assistant Director of the Laboratories Division in the Commonwealth Department of Health who were nominated for these tours visited Europe in 1926.

8. **International Sanitary Convention.**—A Conference of representatives of the various signatory countries to the International Sanitary Convention of Paris of January, 1912, was held in Paris in April, 1925, to consider the draft proposals prepared by the International Office of Public Health for the revision of the Convention. The Director of the Division of Marine Hygiene represented the Commonwealth at this Convention, and the revised Convention has since been ratified.

9. **Far Eastern Epidemiological Bureau, Singapore.**—Under the auspices of the League of Nations, a Conference of the Advisory Committee of the Eastern Intelligence Bureau of the Far East was held at Singapore in January, 1926, and was attended by medical officers representing Australia, British India, British North Borneo, China, Federated Malay States, Hong Kong, French Indo-China, Japan, Netherlands Indies, Spain, and the Straits Settlements, while three medical representatives of the League of Nations, an observer on behalf of the Philippine Islands, and a visitor on behalf of the International Health Board under the Rockefeller Foundation were also present. The Director, Division of Tropical Hygiene in the Department of Health, represented the Commonwealth.

10. **International Pacific Health Conference.**—At the instance of the Commonwealth Government, the British Government in 1925 invited the Governments of the various countries having possessions in the Pacific to send representatives to a Conference to be held at Melbourne for the purpose of examining the problems relating to health and disease of the indigenous races of the various island groups of the Pacific, and of indicating the directions in which international action and co-operation might prevent the introduction of disease. Accordingly, in December, 1926, there assembled in Melbourne representatives of the Governments of Great Britain, France, United States of America, Japan, New Zealand, and the Commonwealth, and of the territorial administrations of the Federated Malay States and the Straits Settlements, Fiji, the Western Pacific, Samoa, Papua, and New Guinea. A delegate also attended from the Health Organization of the League of Nations. The resolutions which were adopted by the delegates formulated and recommended a definite plan for the development within the Austral-Pacific zone of an intelligence service, of quarantine co-operation, and of research.

§ 6. Medical Inspection of School Children.

1. **General.**—Medical inspection of school children is carried out more or less thoroughly in all the States. Medical staffs have been organized, and in some States travelling clinics have been established to deal with dental, ocular, and other defects.

2. **New South Wales.**—A system of medical inspection of school children was organized in 1913, and arrangements have been made, by means of triennial examinations, to examine each child at least twice during the period of school attendance (compulsory between the ages of 7 and 14 years). For this purpose, the staff attached to the Education Department consists of 19 Medical Officers, 19 Dentists (including 8 part-time Dentists), 8 Nurses, 15 Dental Assistants, and a clerical staff of 13.

Parents are notified of their children's defects, and are urged to have them treated. In the metropolitan district, children may be treated as out-patients at hospitals (general and special), or at the two School Dental Clinics. During 1923, the second School Dental Clinic was established at the out-patient department, Children's Hospital, chiefly to obtain strict oral and dental cleanliness before operations on the nose and throat.

In remote and sparsely-settled country districts, defects of vision are provided for by two School Oculists, and a third is to be appointed in 1928. One of these is in charge of the Travelling Hospital, which now includes on its staff two Dental Officers, one Nurse, and one Dental Assistant. During 1926, the number of children examined by the staff of the Travelling Hospital, which included two Dental Clinics, was 1,799; 1,454 were treated for all defects, 1,384 of which were dental. The remaining nine Travelling Dental Clinics treated 14,008 children, and the School Dental Clinics in Sydney, 4,304 (3,297 at the Metropolitan Clinic, and 1,007 at the Children's Hospital).

Of the 72,517 fully examined during 1926, 31,882 (44 per cent.) were notified for treatment of various defects, and of those notified, 15,102 (47.36 per cent.) were treated. In addition there were 76,845 reviews, of whom 13,048 were notified. This does not include the Travelling Hospital's returns, which are shown above, nor does it include the majority of those treated for dental defects by departmental officers, who treat approximately 25 per cent. of the rural and 15 per cent. of the city children in schools visited.

Eliminating dental defects, unremedied medical defects were found in 23.61 per cent. of children. In rural areas, 50.03 per cent. of those notified were treated by "outside" doctors or hospitals. In the city, 43.49 per cent. were treated for various types of defect. Higher percentages in the city are obtained after the following-up work of the School Nurses.

During the four triennial periods ended 1925, 921,183 children were examined, and 502,198 (54 per cent.) were found to be suffering from physical defects requiring treatment.

In the triennium ended 1926, 274,048 children were medically examined, and of this total 120,670 (44.03 per cent.) were recorded as defective. The chief defects were:—Dental, 91,339 cases; nose and throat, 34,022 cases; vision, 14,455 cases; and hearing, 7,746 cases. The number of children treated subsequently for any defect was 61,923.

During the year 1926, 1,566 boys were examined at the Metropolitan Children's Shelter in connexion with the work of the Children's Court. Of these boys, 6.13 per cent. had defects of vision, 2.7 per cent. defects of hearing, and 17.43 per cent. gave a history of nose and throat operation.

The health supervision of High School girls in the Sydney and Newcastle Districts is allotted to a special woman Medical Officer; while another woman Medical Officer is attached to the Teachers' College. Every teacher, on entering the College, is medically examined, and any defects found must be remedied. The teaching of hygiene is aided by a course of thirty lectures which each student receives at the Teachers' College.

Examination of girl delinquents is undertaken by a special female officer attached to the Children's Court, and special examinations and health supervision of subnormal children are conducted at the Glenfield residential special school.

In 1925, certain changes were made in the general scheme. The extra-metropolitan area was divided into three and the metropolis into seven districts, and medical officers allotted accordingly. The work in the metropolis was arranged to permit of an annual, instead of a triennial, visit to every school, but about one-third only of the children will be examined at each visit, viz., entrants, pupils leaving, and cases which are still under review. Special mass investigations are being undertaken into the number and types of feeble minded scholars and of crippled children whose condition has interfered with their attendance. An intensive study of acute rheumatism and its influence on heart disease has been carried on during the past three years.

3. **Victoria.**—The system of medical inspection aims at examining the child three times in its school life, but in the High Schools the students are examined every two years. After the examination, the parents are notified of defects, and are advised to obtain treatment from their own doctor or dentist, and in the metropolitan area two nurses follow up these cases. Attached to the department is a dental centre which deals with about 1,670 children each month from the metropolitan schools. Three

school dentists are constantly at work in the metropolitan area while two visit country districts by rail, and one in charge of a specially equipped motor van attends to the requirements of children attending school in isolated areas.

The staff of the medical branch consists of 8 medical officers, 6 dentists, 7 dental attendants, and two school nurses.

During the year ended 30th June, 1927, 15,540 children and 1,517 teachers were medically examined, and 21,717 received dental treatment. In addition, the nurses of the Bush Nursing Association examine the school children in their districts and report to the Medical Officers of the Education Department, who, in their turn, advise whether medical attention is necessary.

4. **Queensland.**—In matters affecting the general administration of the medical branch of the Department of Public Instruction, the Department acts on the advice of its chief medical officer, who, while acting independently in all matters affecting individual schools, is in close touch with the Department of Public Health, and observes the policy of that department in all matters connected with schools which may have direct bearing upon the health of the State. Medical inspection of school children is carried out by full-time and local part-time medical officers, but the policy of the Department is eventually to employ none but full-time departmental officers. A large number of children is examined each year, and parents are advised of physical defects calling for medical attention. A staff of twelve dentists carries out dental inspection and treatment. Particular attention is paid to diseases of the eyes and tonsils. In the western districts, where ophthalmic diseases formerly were rife, the medical officers in charge of district hospitals are employed to treat cases promptly and thereby prevent the spread of infection. A specially equipped motor dental clinic operates in districts remote from railway lines and centres of population.

In 1927, 24,305 children were medically examined, of whom 4,822 were found to be suffering from physical defects. The departmental dentists examined 47,912 children. Extractions numbered 27,348, fillings 27,834, and other gratuitous treatments 15,264.

5. **South Australia.**—Medical inspection embraces the examination—three times in their school life—of all children attending the primary schools or entering high or technical schools. Reports are furnished to parents of defects likely to interfere with educational progress. The staff consists of one principal medical officer, five medical inspectors, three dentists, five trained nurses, and a disinfecting officer. The dentists attend remote country schools and treat children. There is also a Dental Clinic where children from the metropolitan schools receive treatment. The Medical Inspector meets the parents after the examination of the children, reports any defect, and recommends treatment. It is found that a personal talk is of greater value than a written notice. A trained psychologist is attached to the medical branch.

During the year 1927, 24,104 children were examined by the medical officer, and a considerable number of defects was disclosed. The school dentists gave treatment to 1,214 children in the City Clinic and 2,073 children in the outback districts of the State.

6. **Western Australia.**—Under the Public Health Act 1911–1922, the medical officers of health appointed by the local authorities became medical officers of schools and school children. In the Health Department there are two full time and one half time medical officers for schools, whose duty is to conduct medical examinations, and three school nurses are employed. During 1927, 14,218 (6,340 country and 7,878 metropolitan) children were examined.

7. **Tasmania.**—To Tasmania belongs the credit of being the first State in Australia to provide for the medical inspection of State school children. As far back as 1906, 1,200 children from the Hobart State schools were examined. At the present time 2 full-time medical officers carry out medical inspections in country and convent schools, while 2 part-time medical officers conduct examinations of school children in Hobart and Launceston. There are also 4 nurses, whose chief duty is to visit the homes to advise the parents as to the treatment of defects disclosed by the medical examination. Country schools are visited by medical officers about once every two years, while 2 dentists visit the smaller country schools.

§ 7. Supervision and Care of Infant Life.

1. **General.**—The number of infantile deaths and the rate of infantile mortality for the last five years are given in the following table, which shows that during the period 1923 to 1927 no less than 37,609 children died before reaching their first birthday. With the exception of New South Wales for the year 1924, and Queensland for the year 1926, the rate of mortality in the metropolitan area has in every case been consistently greater than that for the remainder of the State. Further information regarding infantile mortality will be found in Chapter XXV.—Vital Statistics :—

INFANTILE DEATHS AND DEATH RATES, 1923 TO 1927.

State.	Metropolitan.					Remainder of State.				
	1923.	1924.	1925.	1926.	1927.	1923.	1924.	1925.	1926.	1927.
					NUMBER OF INFANTILE DEATHS.					
New South Wales	1,431	1,299	1,282	1,336	1,161	1,846	1,866	1,719	1,724	1,797
Victoria	1,345	1,289	1,155	1,205	1,118	1,011	927	892	764	848
Queensland ..	362	367	318	318	365	716	644	599	683	715
South Australia ..	388	337	287	328	370	317	258	241	181	244
Western Australia	258	232	280	232	210	184	182	183	177	179
Tasmania ..	105	94	101	77	79	220	202	187	156	177
Australia (*b*) ..	3,889	3,618	3,423	3,496	3,303	4,294	4,079	3,821	3,685	3,960
					RATE OF INFANTILE MORTALITY.(*a*)					
New South Wales	63.26	57.18	56.74	60.72	56.39	58.70	60.22	53.68	55.41	54.04
Victoria	71.18	66.32	59.81	62.91	62.46	59.54	55.49	53.70	47.14	49.38
Queensland ..	57.89	57.76	49.71	50.41	57.28	52.15	48.22	43.14	50.76	53.12
South Australia ..	66.70	56.45	48.95	53.03	64.00	53.96	45.89	43.08	34.16	42.72
Western Australia	61.24	53.13	65.71	53.85	57.30	50.54	46.26	49.64	44.33	37.16
Tasmania ..	66.00	61.32	67.83	53.73	55.71	54.11	52.47	50.15	43.88	51.83
Australia (*b*) ..	65.48	59.92	57.13	58.86	59.27	56.69	54.79	50.43	50.05	50.88

(*a*) Number of deaths under one year per 1,000 births registered. (*b*) Exclusive of Territories.

During recent years greater attention has been paid to the fact that the health of the community depends largely on pre-natal as well as after care in the case of mothers and children. Government and private organizations are, therefore, taking steps to provide instruction and treatment for mothers before and after confinement, while the health and well-being of mother and child are looked after by the institution of baby health-centres, baby clinics, crèches, visitation by qualified midwifery nurses, supervision of milk supply, etc.

2. **Government Activities.**—In all the States Acts have been passed with the object of supervising and ameliorating the conditions of infant life and reducing the rate of mortality. Government Departments control the boarding-out to suitable persons of the wards of the State, and wherever possible the child is boarded-out to its mother or near female relative. Stringent conditions regulate the adoption, nursing and maintenance of children placed in foster-homes by private persons, while special attention is devoted to the welfare of ex-nuptial children. (See also in this connexion Chapter XI.—Public Benevolence.) Under the provisions of the Maternity Allowance Act 1912, a sum of five pounds is payable to the mother in respect of each confinement at which a living or viable child is born. Further particulars regarding Maternity Allowance are given in Chapter VIII.—Finance.

3. Nursing Activities.—(i) *General.* In several of the States, the Government maintains institutions which provide treatment for mothers and children, while, in addition, subsidies are granted to various associations engaged in welfare work.

(ii) *New South Wales.* Baby health centres were established by the Government in 1914. Attached to each centre is an honorary medical officer and a staff of trained nurses who instruct mothers in matters pertaining to the care of themselves and their children. In December, 1927, there were 65 centres in operation, of which 37 were in the metropolitan area, 16 in the Newcastle district, and the remainder in important industrial and rural centres. During 1927 the attendances at the clinics numbered 260,000, and the nurses paid 84,500 visits to newly-born babies—viz., 22,000 first visits and 62,500 subsequent visits. No charge is made for attention or advice.

The Royal Society for the Welfare of Mothers and Children conducts two welfare centres in the metropolis, and has two training schools where nurses may receive post-graduate training in infant hygiene and mothercraft. The nurses attached to health centres are required to take this course, and arrangements have been made to train the nurses engaged by the Bush Nursing Association. The Day Nursery Association maintains five nurseries where working mothers may leave their children during the day.

The Bush Nursing Association aims at providing fully-qualified nurses in country districts throughout Australia. Centres may be formed in any district where the residents can enrol sufficient members to guarantee the salary of a nurse. As the greater part of the nurses' work is that of midwifery, the nurses must be registered midwives. In February, 1928, there were 36 bush-nursing centres in New South Wales.

(iii) *Victoria.* The first Baby-Health Centre was opened in 1917. At the latest available date the Victorian Baby-Health Centres' Association had 82 centres in operation, 52 in the metropolitan area, and 30 in country towns. The Association receives subsidies from the State Government and the local municipal councils. During the year ended 30th June, 1927, 23,448 individual babies were taken to the centres, while total attendances numbered 169,580, and 51,761 visits were paid by the nurses to patients in their own homes. The Society for the Health of Women and Children also maintains seven centres in the industrial suburbs of the metropolis and one centre in the country. There are, in addition, crèches where children may be left while the mothers are at work.

The Bush Nursing Association had in February, 1928, 56 centres in operation in the country districts. In connexion with this association there are eight cottage hospitals in operation and others are in process of preparation.

(iv) *Queensland.* Five Baby Clinics have been established in Brisbane by the Government, and others have been formed in ten of the larger provincial centres. A training school has been organized to train nurses for welfare work. For the year 1927 attendances at the clinics numbered 87,503, in addition to which the nurses visited 6,478 newborn babies and paid 8,285 subsequent visits in connexion with the after care of mothers and infants.

There are in the metropolitan area six kindergartens and four crèches where children may be left during the day. The Crèche and Kindergarten Association has established a Training College. The Playgrounds' Association aims at providing playgrounds for children in the populous parts of towns and cities.

The Bush Nursing Association has ten nurses stationed in the country districts.

(v) *South Australia.* Branches of the "Mothers' and Babies' Health Association," recently called "School for Mothers' Institute and Babies' Health Centre," have been established at 33 metropolitan and 4 country centres. This association receives a Government and municipal grant. During the year ended 31st July, 1927, the nurses paid 1,688 visits to expectant mothers and 31,773 to young babies. In August, 1921, baby clinics were established, to which, in 1926–27, 39,225 babies were brought for examination, advice and information being given where necessary to the mothers. There is a crèche at West Adelaide for the benefit of the children of women obliged to earn their own living.

The District Trained Nursing Society has over 30 branches, of which about half are in the metropolitan area. A hospital at Denial Bay has been taken over by the society. The nurses of this society paid 63,301 visits to homes. Nursing homes have been established by the Australian Inland Mission at Beltana and Oodnadatta in the far north of South Australia, and at three places in the Northern Territory.

(vi) *Western Australia.* The organizations which aim at improving the conditions of infant life include an ante-natal clinic established by the Government at the King Edward Maternity Hospital, a day nursery where children may be left and cared for while the mothers are away at work, and the Infant Health Association, which is subsidized by the government and local authorities, and which controls twelve centres, with a specially trained nurse in charge of each. During the year ended 31st December, 1927, the attendances at clinics numbered 15,713, in addition to which the nurses paid 5,372 visits to homes.

The Bush Nursing Trust maintains a rest-house for expectant mothers, and the Australian Inland Mission has nursing homes at Hall's Creek and Port Hedland.

(vii) *Tasmania.* There are four baby clinics in Hobart, two in Launceston, and one in the country, controlled by Child Welfare Associations. During the year 1927, the nurses visited 9,580 homes, and attendances at the clinics for the same period numbered 19,219. The number of individual babies taken to the clinics was 2,474. A mother-craft home was opened in Hobart in August, 1925, with accommodation for 10 babies and 3 mothers. During 1927, 31 mothers and 63 babies were inmates of the home and 4 trained nurses completed a special course in infant hygiene.

The Bush Nursing Association, which is subsidized by the Health Department, the Red Cross Fund, and municipal councils, has stationed nurses in fifteen country districts.

(viii) *Summary.* The following table gives particulars of the activities of the Baby Health Centres and the Bush Nursing Associations :—

BABY HEALTH CENTRES AND BUSH NURSING ASSOCIATIONS, 1927.

Heading.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Total.
Baby Health Centres :—							
Metropolitan No.	39	59	5	33	10	4	150
Urban-Provincial, and Rural No.	28	31	10	4	3	3	79
Total No.	67	90	15	37	13	7	229
Attendances at Centres .. No.	260,000	169,580	87,503	39.225	15,713	19,219	591,240
Visits paid by Nurses .. No.	84,500	51,761	14,763	63,301	5,372	9,580	229,277
Bush Nursing Association, Number of Centres	36	56	10	(a) 30	1	15	148

(a) District Trained Nursing Society.

CHAPTER XIII.—LABOUR, WAGES, AND PRICES.

A.—PRICES.

§ 1. Wholesale Prices.

1. **General.**—The results of an investigation into wholesale prices in Melbourne from 1871 to the end of September, 1912, were given in some detail in Report No. 1 of the Labour and Industrial Branch, while summarized results for later years are included in subsequent Reports.

The index-numbers up to the year 1911 are based on the prices of eighty commodities, but since that year the number has been increased to ninety-two.* The methods followed for the computation of the wholesale price index-numbers are similar to those adopted in regard to retail prices. The commodities included, the units of measurement for which the prices are taken, and the mass-units indicating the relative extent to which each commodity is used or consumed, are shown in a tabular statement in Labour Report No. 18 for 1927 (page 10).

2. **Index-Numbers.**—Index-numbers have been computed for each group of commodities, as well as for all groups together. The index-numbers for the several groups, and for all groups together, are shown in the following table, and in each case were computed with the prices in the year 1911 as base. They show, for each of the years specified, the expenditure necessary—if distributed in purchasing the relative quantities (indicated by the mass-units) of the several commodities concerned—to purchase what would have cost £1,000 in 1911. Thus, from the last column it will be seen that the cost of the relative quantities of the various commodities was 1,229 in 1871, and 974 in 1901, as compared with 1,000 in 1911, 1,903 in 1921, and 1,817 in 1927. In other words, prices were lower in 1911 than in either 1871, 1921, or 1927, and the purchasing power of money in 1911 was, accordingly, greater. Again, prices were lower in 1901 than in 1911, and the purchasing power of money in the former year was, therefore, greater.

INDEX-NUMBERS.—WHOLESALE PRICES, MELBOURNE, 1861 TO 1927.

(Base 1911 = 1,000).

Year.	I. Metals and Coal.	II. Jute, Leather, etc.	III. Agricultural Produce, etc.	IV. Dairy Produce.	V. Groceries.	VI. Meat.	VII. Building Materials.	VIII. Chemicals.	All Commodities together.
1861 ..	1,438	1,881	1,583	1,008	1,963	..	1,070	2,030	**1,538**
1871 ..	1,096	1,257	1,236	864	1,586	..	1,044	1,409	**1,229**
1881 ..	1,178	1,115	1,012	935	1,421	..	1,091	1,587	**1,121**
1891 ..	895	847	1,024	995	1,032	888	780	1,194	**945**
1901 ..	1,061	774	928	1,029	1,048	1,345	841	917	**974**
1902 ..	1,007	756	1,193	1,215	945	1,447	837	881	**1,051**
1903 ..	923	834	1,209	1,059	936	1,443	875	921	**1,049**
1904 ..	821	885	754	876	916	1,427	845	875	**890**
1905 ..	772	850	894	980	942	1,209	801	859	**910**
1906 ..	882	978	916	972	923	1,110	896	864	**948**
1907 ..	1,037	1,017	973	1,020	948	1,294	968	961	**1,021**
1908 ..	1,033	901	1,312	1,198	968	1,335	935	891	**1,115**
1909 ..	1,014	907	1,000	1,119	978	1,088	911	815	**993**
1910 ..	1,004	1,052	969	1,100	999	1,008	996	898	**1,003**
1911 ..	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**	**1,000**
1912 ..	1,021	989	1,370	1,206	1,052	1,357	1,057	978	**1,172**
1913 ..	1,046	1,070	1,097	1,055	1,024	1,252	1,128	995	**1,086**
1914 ..	1,099	1,032	1,207	1,137	1,021	1,507	1,081	1,253	**1,149**
1915 ..	1,284	1,017	2,162	1,530	1,133	2,435	1,275	1,528	**1,604**
1916 ..	1,695	1,423	1,208	1,485	1,322	2,515	1,491	1,760	**1,504**
1917 ..	2,129	2,008	1,157	1,423	1,343	2,403	1,884	2,171	**1,662**
1918 ..	2,416	2,360	1,444	1,454	1,422	2,385	2,686	3,225	**1,934**
1919 ..	2,125	2,363	1,985	1,651	1,516	2,348	2,851	2,898	**2,055**
1920 ..	2,298	2,624	2,439	2,209	1,918	3,279	3,226	2,825	**2,480**
1921 ..	2,173	1,362	1,767	2,000	1,976	2,158	2,733	2,303	**1,903**
1922 ..	1,942	1,681	1,628	1,648	1,869	1,787	2,005	1,965	**1,758**
1923 ..	1,826	2,148	1,778	1,837	1,746	2,579	2,025	1,933	**1,944**
1924 ..	1,835	2,418	1,647	1,655	1,721	2,223	1,815	1,806	**1,885**
1925 ..	1,852	1,967	1,797	1,636	1,723	2,212	1,711	1,790	**1,844**
1926 ..	1,938	1,582	2,001	1,784	1,731	1,931	1,665	1,816	**1,832**
1927 ..	1,962	1,650	1,826	1,823	1,724	2,111	1,624	1,866	**1,817**

NOTE.—The figures given in this table are comparable in the vertical columns, but are not directly comparable horizontally. The index numbers are reversible.

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* In the computation of the index-numbers for years prior to 1911, the aggregate expenditure on 80 commodities in 1911 is taken as base (= 1,000), while for later years the aggregate expenditure on 92 commodities is taken.

3. Fluctuations, July, 1914, to July, 1928.—Since the outbreak of war, prices of many commodities have increased considerably. This is shown in the following table in which the index-numbers are given for each group for the months of July, 1922, to July, 1928, taking July, 1914, the last month before the outbreak of war, as base (= 1,000) for each group :—

INDEX-NUMBERS.—WHOLESALE PRICES, MELBOURNE, JULY, 1914, TO JULY, 1928.

	I.	II.	III.	IV.	V.	VI.	VII.	VIII.	
Particulars.	Metals and Coal.	Jute, Leather etc.	Agricultural Produce, etc.	Dairy Produce.	Groceries.	Meat.	Building Materials.	Chemicals.	All Groups.
July, 1914 ..	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
„ 1922 ..	1,764	1,555	1,532	1,564	1,810	1,185	1,681	1,991	1,569
„ 1923 ..	1,658	1,876	1,691	1,668	1,698	2,229	1,780	1,923	1,799
„ 1924 ..	1,666	2,119	1,525	1,431	1,677	1,281	1,666	1,743	1,626
„ 1925 ..	1,663	1,744	1,643	1,404	1,667	1,492	1,605	1,716	1,618
„ 1926 ..	1,741	1,456	1,860	1,514	1,686	1,248	1,557	1,798	1,615
„ 1927 ..	1,789	1,503	1,674	1,606	1,677	1,390	1,518	1,826	1,607
„ 1928 ..	1,738	1,656	1,618	1,477	1,654	1,217	1,593	1,862	1,573

§ 2. Retail Prices and House Rents.

1. Introduction.—(i) *General.* In Labour Report No. 1, issued in December, 1912, the results of certain investigations into the subjects of Prices, Price-Indexes and Cost of Living in past years were published, and some account was given of the methods employed for the collection of the data and of the technique adopted in the computation of the results. A detailed examination of the theory upon which the calculation of the index-numbers is based was given, but being necessarily too technical for inclusion in the general chapter, was relegated to Appendixes. The results of further investigations are included in the annual Labour Reports and Quarterly Summaries of Australian Statistics issued by this Bureau.

(ii) *Computation of Index-Numbers.* The method adopted for the computation of the index-numbers is what is termed the " aggregate expenditure " method. Thereunder the average price of each commodity included is ascertained, and numbers (called " mass-units ") representing the *relative* extent to which each commodity was on the average used or consumed are also computed. The price in any year of each commodity multiplied by its corresponding " mass-unit " represents, therefore, the relative total expenditure on that commodity in that year *on the basis of the adopted regimen.* It follows, therefore, that by taking for any year the sum of the price of each commodity multiplied by its corresponding " mass-unit," a figure is obtained which represents the relative aggregate or total expenditure of the community in that year on all the commodities, etc., included. By computing these aggregate expenditures for a series of years and taking the expenditure in any selected year as " base," that is, making the expenditure in that year equal to 1,000 units, the relative expenditure in any other year, or what may be termed the " index-number," is readily ascertained. Numerical examples of the technique and methods adopted for the computation of index-numbers were given in Report No. 2 (pp. 44 and 45), and in Report No. 9 Appendixes I. to IV., pp. 174 to 229.

2. Scope of Investigation.—As noted in Report No. 1, distinction must be drawn between (*a*) Variations in the *purchasing-power* of money, and (*b*) Variations in the *standard of living*, and in Report No. 2 attention was directed to the factors which must be taken into consideration in dealing with these matters in order to arrive at a satisfactory aggregate expenditure. The various Reports deal with the list of commodities selected and the reasons for their adoption, while § 4 of this Chapter deals with the extension of the inquiry to cover all ordinary household expenditure.

3. Variations in Index-Numbers for Retail Prices and House Rents, Capital Cities, 1907 to 1927.—(i) *General.* In Labour Reports and Bulletins, and in recent issues of the Quarterly Summaries of Statistics, index-numbers were given for each of the four groups and for all groups combined for each capital city since 1901, the expenditure in 1911 being taken in each case as base (= 1,000). In this sub-section summarized results only are given, firstly, for food and groceries ; secondly, for house rent ; and thirdly, for the groups combined—the weighted average expenditure for all capital cities in 1911 being taken in each case as base (= 1,000). The index-numbers in each table are fully comparable with one another, since they show not only the variations from year to year in each capital, but also the relative cost as between the cities.

(ii) *Food and Groceries.* The index-numbers thus computed for the three groups comprising groceries and food are shown in the following table for 1907, 1911, 1914, 1921, and for the last five years :—

RETAIL PRICE INDEX-NUMBERS, FOOD AND GROCERIES.—CAPITAL CITIES, 1907 TO 1927.

City.	1907.	1911.	1914.	1921.	1923.	1924.	1925.	1926.	1927.
Sydney	936	989	1,156	1,898	1,820	1,732	1,785	1,867	1,846
Melbourne	925	935	1,091	1,901	1,802	1,684	1,748	1,774	1,732
Brisbane	947	1,018	1,078	1,812	1,693	1,690	1,734	1,788	1,680
Adelaide	951	1,020	1,215	1,906	1,823	1,791	1,840	1,869	1,841
Perth	1,197	1,346	1,302	1,995	1,828	1,891	1,938	1,866	1,796
Hobart	1,010	1,058	1,212	2,025	1,863	1,849	1,810	1,868	1,788
Weighted Average (*a*) ..	955	1,000	1,144	1,902	1,805	1,732	1,785	1,829	1,789

(*a*) For all capital cities.

The figures quoted are directly comparable in every respect ; thus, the same quantity of food and groceries, which cost £1,000 in the capital cities considered as a whole in 1911, would have cost £1,156 in Sydney in 1914, £1,346 in Perth in 1911, or £1,732 in Melbourne in 1927.

In 1927 decreases were experienced in all the capitals from the previous year. Comparing the results for 1927 with those for 1911, the extent by which prices increased varied from 86.7 per cent. in Sydney to 33.4 per cent. in Perth. Prices, however, were abnormally high in Perth in 1911. The average retail prices in the six capitals considered as a whole in 1927, compared with prices in 1911, were 78.9 per cent. higher.

(iii) *Housing.* In previous issues of the Official Year Book the computations of index-numbers of housing accommodation were based upon the rentals of all houses from under 4 rooms to 8 rooms and over. In the following tables that basis has been altered, to accord with a resolution adopted by the Conference of Statisticians of Australia and New Zealand to the following effect : "that for purposes of computing price levels in respect of rent, it is desirable that houses of four and five rooms only be taken into account." This alteration will account for the difference between index-numbers given in the following tables and those given for the same tables in issues of the Official Year Book prior to No. 19 for the year 1926.

The following table gives index-numbers computed for the weighted average house rent of 4 and 5 roomed houses in each of the capital cities from 1907 to 1927, taking the average rent for the six capitals in 1911 as the base (=1,000). The average rent has been obtained for each city separately by multiplying the weighted average rent for each class of house (*i.e.*, wooden houses of 4 rooms and of 5 rooms and brick houses of 4 rooms and of 5 rooms) by a number (" weight ") representing the relative number of houses of that class in the particular city. The sum of the products thus obtained divided by the sum of the weights, gives the weighted average for 4 and 5 roomed houses combined. The number of houses in each class for each city was obtained from the results of the 1921 census, and the index-numbers are based on the weighted average rents for 4 and 5 roomed houses combined, and do not refer to any particular class of house. The actual predominant rents for each class are given in appendixes to Labour Reports, and an examination of these figures shows that for some classes of houses the increase has been greater, and in some less, than the general increase indicated in the following table.

INDEX-NUMBERS.—HOUSING, CAPITAL CITIES, 1907 TO 1927.

City.	1907.	1911.	1914.	1921.	1923.	1924.	1925.	1926.	1927.
Sydney	969	1,145	1,243	1,617	1,739	1,831	1,870	1,826	1,814
Melbourne	744	931	1,027	1,340	1,534	1,574	1,604	1,695	1,710
Brisbane	463	610	762	1,030	1,151	1,157	1,165	1,333	1,361
Adelaide	835	1,155	1,071	1,322	1,450	1,540	1,576	1,516	1,540
Perth	749	857	963	1,209	1,294	1,311	1,340	1,469	1,507
Hobart	661	739	847	1,441	1,503	1,592	1,649	1,628	1,579
Weighted Average (*a*) ..	813	1,000	1,082	1,410	1,553	1,615	1,647	1,677	1,684

(*a*) For all capital cities.

NOTE.—The above figures are directly comparable in every respect.

(iv) *Food, Groceries, and Housing 4 and 5 roomed Houses combined.* The weighted averages for all groups are of importance, as indicating the general results of this investigation so far as the purchasing-power of money is concerned. The following table shows the index-numbers for groceries, food, and house rent (4 and 5 roomed houses) for each capital city, the weighted average cost for the six capitals in 1911 being taken as base (=1,000):—

RETAIL PRICE INDEX-NUMBERS(*a*)—FOOD, GROCERIES, AND HOUSING.—CAPITAL CITIES, 1907 TO 1927.

City.	1907.	1911.	1914.	1921.	1923.	1924.	1925.	1926.	1927.
Sydney	948	1,048	1,188	1,793	1,790	1,769	1,817	1,852	1,834
Melbourne	857	934	1,067	1,690	1,702	1,643	1,694	1,744	1,724
Brisbane	765	865	959	1,519	1,490	1,490	1,521	1,617	1,560
Adelaide	908	1,070	1,161	1,687	1,683	1,697	1,741	1,736	1,728
Perth	1,029	1,162	1,175	1,700	1,627	1,673	1,714	1,717	1,687
Hobart	879	938	1,075	1,806	1,728	1,753	1,750	1,778	1,710
Weighted Average (*b*) ..	900	1,000	1,121	1,717	1,710	1,688	1,733	1,772	1,749

(*a*) As the price index-number increases, the purchasing-power of money diminishes.
(*b*) For all capital cities.

NOTE.—The above figures are directly comparable in every respect.

The combination of housing with prices of food and groceries has had the effect of considerably modifying the index of prices, or, in other words, the purchasing-power of money, as compared with the similar index based on food and groceries only. In 1921 there were increases in prices of food and groceries and housing, the combined results for the six capital cities for 1921 being an increase of 53.2 per cent. over 1914, and 71.7 per cent. over 1911. The increase in the index-number between 1921 and 1914 varied between the capital cities from 45 per cent. in Perth to 68 per cent. in Hobart, while between 1921 and 1911 it varied between 46 per cent. in Perth and 93 per cent. in Hobart. In 1923 there was an increase in the combined cost of food, groceries, and housing in all the cities, the weighted average index-number being 1,710 as compared with 1,610 in 1922. The index-number for 1924 shows a decline of 1.3 per cent. on that for 1923, that for 1925 shows an increase of 2.6 per cent. from 1924, food and groceries having increased 3 per cent., and housing increased 2 per cent., while that for 1926 discloses a rise of 2.3 per cent. over 1925, both food and groceries and housing again showing increases. The index-numbers for 1927 disclose a decrease on 1926 prices of 1.3 per cent., the drop in prices of food and groceries of 2.2 per cent. more than outweighing the slight increase in rents.

4. **Retail Price Index-Numbers in Terms of Currency.**—The tables in sub-section 3 give the relative cost in the six capital cities of food, groceries, and housing from 1907 to 1927 in the form of index-numbers. The figures have been converted into a monetary basis in the next table, and show the sums which would have to be paid in each city and in each year in order to purchase such relative quantities (indicated by the mass units) of the several commodities, and to pay such sums for housing as would in the aggregate cost £1, according to the weighted average prices and rents in the six capitals in 1911.

RETAIL PRICES.—AMOUNTS NECESSARY ON THE AVERAGE IN EACH YEAR FROM 1907 TO 1928 (2nd QUARTER) TO PURCHASE IN EACH CAPITAL CITY WHAT WOULD COST ON THE AVERAGE £1 IN 1911 IN THE AUSTRALIAN CAPITALS REGARDED AS A WHOLE.

Year.		Sydney.		Melb'ne.		Brisbane.		Adelaide.		Perth.		Hobart.		Weighted Average of 6 Capital Cities.	
Food and Groceries (46 Commodities).															
		s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
1907	.. ..	18	9	18	6	18	11	19	0	23	11	20	2	19	1
1911	.. ..	19	9	18	8	20	4	20	5	26	11	21	2	20	0
1914	.. ..	23	1	21	10	21	7	24	4	26	0	24	3	22	11
1920	.. ..	43	0	41	1	41	1	42	8	41	0	43	3	42	0
1922	.. ..	34	1	32	11	32	2	34	6	35	6	35	11	33	8
1923	.. ..	36	5	36	1	33	10	36	6	36	7	37	3	36	1
1924	.. ..	34	8	33	8	33	10	35	10	37	10	37	0	34	8
1925	.. ..	35	8	35	0	34	8	36	10	38	9	36	2	35	8
1926	.. ..	37	4	35	6	35	9	37	5	37	4	37	4	36	7
1927	.. ..	36	11	34	8	33	7	36	10	35	11	35	9	35	9
1927	1st Quarter ..	36	11	34	0	34	5	36	7	36	3	36	3	35	8
	2nd ,, ..	36	2	33	10	32	10	36	5	36	7	35	9	35	2
	3rd ,, ..	36	4	35	7	33	4	37	6	35	6	35	11	35	11
	4th ,, ..	38	2	35	3	33	10	36	9	35	5	35	2	36	5
1928	1st ,, ..	36	8	34	4	33	5	36	2	35	4	34	7	35	5
	2nd ,, ..	36	11	34	2	33	5	36	7	38	1	34	9	35	8
Housing Accommodation (Weighted Average—4 and 5 Roomed Houses).															
1907	.. ..	19	5	14	11	9	3	16	8	15	0	13	3	16	3
1911	.. ..	22	11	18	7	12	2	23	1	17	2	14	9	20	0
1914	.. ..	24	10	20	6	15	3	21	5	19	3	16	11	20	8
1920	.. ..	30	10	25	5	20	4	24	10	22	11	28	5	26	11
1922	.. ..	33	7	28	10	22	7	27	6	25	1	27	2	28	9
1923	.. ..	34	9	30	8	23	0	29	0	25	11	30	1	31	1
1924	.. ..	36	7	31	6	23	2	30	10	26	3	31	10	32	4
1925	.. ..	37	5	32	1	23	4	31	6	26	10	33	0	32	11
1926	.. ..	36	6	33	11	26	8	30	4	29	5	32	7	33	7
1927	.. ..	36	3	34	2	27	3	30	10	30	2	31	7	33	8
1927	1st Quarter ..	36	3	34	0	26	8	30	5	29	8	32	0	33	6
	2nd ,, ..	36	6	34	0	26	8	30	5	29	7	31	9	33	7
	3rd ,, ..	36	2	34	4	27	9	31	3	30	7	31	6	33	10
	4th ,, ..	36	3	34	6	27	9	31	2	30	9	31	1	33	11
1928	1st ,, ..	37	4	35	7	27	8	33	5	30	9	30	9	34	11
	2nd ,, ..	37	4	35	7	27	7	33	7	30	10	30	9	34	11
Food, Groceries, and Housing (4 and 5 rooms only) Combined.															
1907	.. ..	19	0	17	2	15	4	18	2	20	7	17	7	18	0
1911	.. ..	21	0	18	8	17	4	21	5	23	3	18	9	20	0
1914	.. ..	23	9	21	4	19	2	23	3	23	6	21	6	22	5
1920	.. ..	38	5	35	3	33	3	35	11	34	2	37	8	36	4
1922	.. ..	33	10	31	5	28	6	31	10	31	7	32	7	32	2
1923	.. ..	35	10	34	0	29	10	33	8	32	6	34	7	34	2
1924	.. ..	35	5	32	10	29	10	33	11	33	6	35	1	33	9
1925	.. ..	36	4	33	11	30	5	34	10	34	3	35	0	34	8
1926	.. ..	37	1	34	11	32	4	34	9	34	4	35	7	35	5
1927	.. ..	36	8	34	6	31	2	34	7	33	9	34	2	35	0
1927	1st Quarter ..	36	8	34	0	31	6	34	3	33	9	34	8	34	10
	2nd ,, ..	36	4	33	11	30	7	34	2	33	11	34	3	34	7
	3rd ,, ..	36	4	35	1	31	3	35	1	33	8	34	3	35	1
	4th ,, ..	37	5	34	11	31	7	34	8	33	8	33	8	35	6
1928	1st ,, ..	36	11	34	9	31	3	35	2	33	7	33	2	35	3
	2nd ,, ..	37	1	34	9	31	2	35	5	35	4	33	3	35	5

5. Variations in Index-Numbers, Retail Prices and Housing, Thirty Australian Towns, 1925 to 1927.—The index-numbers given in the preceding sub-sections show changes in the cost of food, groceries, and housing separately for each capital city during the years 1907 to 1927. The figures given in the next table show the relative cost of food and groceries, and of housing for the years 1925 to 1927 in the thirty towns for which particulars are now collected. The weighted aggregate expenditure for the six capitals for the year 1911 has been taken as base and made equal to 1,000, hence the columns are comparable both horizontally and vertically. The index-numbers in the last column are the same as in previous tables where the period and town are comparable.

INDEX-NUMBERS, THIRTY TOWNS, SHOWING RELATIVE EXPENDITURE ON FOOD AND GROCERIES AND ON HOUSING (4 AND 5 ROOMS) SEPARATELY, AND ON THESE ITEMS COMBINED. BASIS OF TABLE = WEIGHTED AVERAGE EXPENDITURE ON FOOD, GROCERIES, AND HOUSING (4 AND 5 ROOMS) IN THE SIX CAPITAL CITIES IN 1911 = 1,000.

Town.	1925.			1926.			1927.		
	Food and Groceries.	Housing.	Food, Groceries, and Housing.	Food and Groceries.	Housing.	Food, Groceries, and Housing.	Food and Groceries.	Housing.	Food, Groceries, and Housing.
New South Wales—									
Sydney	1,115	702	1,817	1,166	686	1,852	1,153	681	1,834
Newcastle	1,125	621	1,746	1,155	638	1,793	1,144	652	1,796
Broken Hill	1,315	376	1,691	1,322	413	1,735	1,345	425	1,770
Goulburn	1,115	634	1,749	1,156	654	1,810	1,150	698	1,848
Bathurst	1,074	516	1,590	1,119	547	1,666	1,112	532	1,644
Weighted Average ..	1,120	685	1,805	1,168	674	1,842	1,157	671	1,828
Victoria—									
Melbourne	1,092	602	1,694	1,108	636	1,744	1,082	642	1,724
Ballarat	1,101	388	1,489	1,131	384	1,515	1,105	387	1,492
Bendigo	1,111	409	1,520	1,125	449	1,574	1,106	483	1,589
Geelong	1,081	496	1,577	1,100	589	1,689	1,078	612	1,690
Warrnambool	1,074	459	1,533	1,096	455	1,551	1,060	486	1,546
Weighted Average ..	1,092	581	1,673	1,109	616	1,725	1,083	623	1,706
Queensland—									
Brisbane	1,083	438	1,521	1,116	501	1,617	1,049	511	1,560
Toowoomba	1,045	428	1,473	1,105	454	1,559	1,018	457	1,475
Rockhampton	1,092	386	1,478	1,170	407	1,577	1,122	428	1,550
Charters Towers ..	1,171	346	1,517	1,268	349	1,617	1,271	346	1,617
Warwick	1,042	408	1,450	1,121	439	1,560	1,082	458	1,540
Weighted Average ..	1,083	428	1,511	1,126	482	1,608	1,062	492	1,554
South Australia—									
Adelaide	1,149	592	1,741	1,167	569	1,736	1,150	578	1,728
Kadina, &c.	1,158	326	1,484	1,203	310	1,513	1,196	312	1,508
Port Pirie	1,208	394	1,602	1,246	426	1,672	1,196	431	1,627
Mount Gambier ..	1,095	308	1,403	1,143	325	1,468	1,133	314	1,447
Peterborough	1,211	477	1,688	1,238	457	1,695	1,231	491	1,722
Weighted Average ..	1,152	568	1,720	1,171	549	1,720	1,154	557	1,711
Western Australia—									
Perth, &c.	1,210	504	1,714	1,165	552	1,717	1,122	565	1,687
Kalgoorlie, &c. ..	1,339	337	1,676	1,327	337	1,664	1,282	332	1,614
Northam	1,257	528	1,785	1,260	527	1,787	1,226	549	1,775
Bunbury	1,255	438	1,693	1,253	434	1,687	1,238	437	1,675
Geraldton	1,284	525	1,809	1,255	529	1,784	1,229	534	1,763
Weighted Average ..	1,228	485	1,713	1,188	525	1,713	1,145	538	1,683
Tasmania—									
Hobart	1,131	619	1,750	1,167	611	1,778	1,117	593	1,710
Launceston	1,121	495	1,616	1,151	489	1,640	1,102	483	1,585
Burnie	1,137	503	1,640	1,186	482	1,668	1,135	473	1,608
Devonport	1,155	468	1,623	1,177	466	1,643	1,123	457	1,580
Queenstown	1,278	304	1,582	1,301	244	1,545	1,234	261	1,495
Weighted Average ..	1,135	561	1,696	1,168	552	1,720	1,118	539	1,657
Weighted Average for 30 Towns	1,118	597	1,715	1,147	609	1,756	1,121	613	1,734
Weighted Average 6 Capital Cities ..	1,114	619	1,733	1,142	630	1,772	1,117	632	1,749

§ 3. Retail Price Index-Numbers, 200 Towns.

1. **General.**—To supplement the information collected each month for the 30 towns specified in the preceding paragraph, a special investigation was initiated in November, 1913, into retail price index-numbers in 70 additional towns. This investigation was repeated in November, 1914, and again in November, 1915, when the number of additional towns was increased to 120. In November, 1923, the number of additional towns was further increased to 170, and it is intended to institute inquiries in November in each year, thus making information available annually for 200 towns. The results of the first investigation were published in Labour Bulletin No. 5 (Section IV., pages 26

to 33), where a description was given of the methods adopted in making the investigation and in computing the index-numbers. The results of the succeeding yearly investigations have appeared in the Labour Bulletins and Reports of this Bureau.

2. **Detailed Results, 1925 to 1927.**—The results of the investigation made in November, 1925 to 1927, are set out in the following tables. The aggregate expenditure on food and groceries separately is shown in the form of index-numbers for each year in column A. In columns B and C the corresponding aggregate expenditure on food, groceries, and rent of 4 rooms, and food, groceries, and rent of 5 rooms are shown for each year for each individual town. The index-number 1,703 represents the weighted average expenditure in 200 towns on food, groceries, and rent of 5-roomed houses ; 1,570 represents the average weighted expenditure on food, groceries, and rent of 4-roomed houses in November, 1927. Similarly, in column A, the index-number 1,082 represents the relative weighted average expenditure on food and groceries only for November, 1927. The figures given in the table are comparable throughout. Thus, taking the average weighted expenditure for all 200 towns on food, groceries, and rent of 5-roomed houses as equal to 1,703, the expenditure on the same items in Melbourne is 1,728, while if 4-roomed houses were substituted for 5-roomed the expenditure in Melbourne would be represented by 1,573.

A change has been made in the basis on which the index-numbers in this table are computed. Previously, the weighted average expenditure on food, groceries, and rent of 5-roomed houses for the 150 towns in each year was taken as base. In the tables on the following pages the basis taken is the weighted average expenditure on food, groceries, and housing accommodation in the six capital cities in 1911, is made equal to 1,000.

INDEX-NUMBERS.—COST OF FOOD, GROCERIES, AND HOUSING IN 200 TOWNS IN 1925, 1926, AND 1927, COMPARED WITH THE WEIGHTED AVERAGE COST OF FOOD, GROCERIES, AND RENT FOR ALL HOUSES IN THE SIX CAPITAL CITIES IN 1911 AS BASE (=1,000).

State and Town.	1925. November.			1926. November.			1927. November.		
	Food and Groceries only.	Food, Groceries, and Rent of 4-Roomed Houses.	Food, Groceries, and Rent of 5-Roomed Houses.	Food and Groceries only.	Food, Groceries, and Rent of 4-Roomed Houses.	Food, Groceries, and Rent of 5-Roomed Houses.	Food and Groceries only.	Food, Groceries, and Rent of 4-Roomed Houses.	Food, Groceries, and Rent of 5-Roomed Houses.
	A	B	C	A	B	C	A	B	C
NEW SOUTH WALES—									
Sydney	1,072	1,623	1,759	1,096	1,649	1,769	1,129	1,673	1,790
Newcastle	1,090	1,603	1,733	1,071	1,576	1,724	1,103	1,637	1,793
Broken Hill	1,244	1,570	1,648	1,196	1,563	1,651	1,300	1,663	1,775
Goulburn	1,086	1,607	1,695	1,072	1,636	1,713	1,111	1,650	1,827
Bathurst	1,043	1,418	1,488	1,038	1,423	1,506	1,057	1,440	1,516
Albury	1,082	1,812	1,954	1,083	1,817	1,962	1,087	1,804	1,975
Armidale	1,095	1,464	1,674	1,052	1,421	1,631	1,058	1,522	1,624
Ballina	1,175	1,644	1,742	1,191	1,639	1,685	1,118	1,604	1,699
Bega	1,114	1,432	1,561	1,089	1,331	1,449	1,122	1,461	1,536
Berry	1,151	1,464	1,595	1,133	1,445	1,577	1,182	1,537	1,656
Blackheath	1,203	1,677	1,779	1,235	1,676	1,771	1,232	1,657	1,795
Bourke	1,201	1,382	1,474	1,176	1,407	1,505	1,289	1,533	1,599
Bowral	1,118	1,684	1,790	1,182	1,741	1,820	1,119	1,765	1,831
Casino	1,157	1,617	1,708	1,163	1,681	1,772	1,106	1,550	1,759
Cessnock	1,094	1,664	1,774	1,108	1,651	1,749	1,109	1,652	1,718
Cobar	1,156	1,245	1,291	1,174	1,283	1,309	1,329	1,438	1,487
Cooma	1,131	1,474	1,615	1,118	1,422	1,611	1,233	1,542	1,741
Coonamble	1,143	1,459	1,569	1,105	1,447	1,572	1,214	1,558	1,682
Cootamundra	1,100	1,669	1,807	1,100	1,594	1,791	1,130	1,624	1,821
Corrimal	1,077	1,471	1,498	1,112	1,507	1,533	1,106	1,455	1,567
Cowra	1,102	1,536	1,668	1,159	1,559	1,631	1,106	1,633	1,657
Cronulla	1,099	1,740	1,878	1,105	1,672	1,832	1,144	1,675	1,844
Deniliquin	1,078	1,412	1,529	1,072	1,391	1,549	1,080	1,471	1,583
Dubbo	1,141	1,630	1,741	1,119	1,645	1,733	1,158	1,709	1,791
Forbes	1,098	1,609	1,756	1,133	1,609	1,727	1,123	1,684	1,822

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	A	B	C	A	B	C	A	B	C
NEW SOUTH WALES—*continued.*									
Gilgandra	1,146	1,398	1,556	1,176	1,505	1,584	1,203	1,532	1,611
Glen Innes	1,000	1,337	1,505	1,008	1,344	1,532	1,029	1,431	1,569
Grafton	1,093	1,611	1,734	1,079	1,588	1,737	1,060	1,561	1,718
Grenfell	1,120	1,571	1,696	1,092	1,533	1,678	1,076	1,499	1,668
Griffith	1,166	1,877	2,186	1,151	1,973	2,203	1,254	2,175	2,406
Gulgong	1,093	1,297	1,350	1,084	1,341	1,440	1,162	1,432	1,527
Gunnedah	1,051	1,437	1,545	1,027	1,417	1,507	1,127	1,512	1,658
Hay	1,175	1,513	1,683	1,151	1,488	1,684	1,136	1,514	1,704
Inverell	1,103	1,513	1,607	1,111	1,590	1,696	1,122	1,561	1,639
Junee	1,068	1,699	1,788	1,077	1,756	1,800	1,123	1,781	1,787
Katoomba	1,147	1,663	1,779	1,136	1,719	1,840	1,159	1,797	1,938
Kempsey	1,046	1,472	1,547	1,086	1,527	1,607	1,106	1,599	1,691
Kiama	1,145	1,492	1,651	1,145	1,507	1,606	1,145	1,507	1,606
Kurri Kurri	1,148	1,576	1,658	1,156	1,545	1,605	1,150	1,619	1,673
Leeton	1,172	1,896	1,932	1,176	1,854	1,861	1,216	1,890	1,972
Lismore	1,088	1,490	1,680	1,167	1,696	1,879	1,101	1,561	1,703
Lithgow	1,087	1,489	1,581	1,116	1,535	1,626	1,093	1,543	1,627
Maitland	1,078	1,578	1,700	1,076	1,560	1,717	1,090	1,567	1,690
Moree	1,183	1,657	1,782	1,194	1,734	1,869	1,155	1,666	1,917
Moss Vale	1,121	1,648	1,779	1,075	1,562	1,680	1,126	1,701	1,797
Mudgee	1,086	1,503	1,601	1,084	1,486	1,611	1,143	1,582	1,680
Narrabri	1,096	1,403	1,518	1,066	1,434	1,579	1,163	1,557	1,712
Narrandera	1,164	1,592	1,727	1,189	1,682	1,880	1,123	1,627	1,855
Nowra	1,105	1,553	1,681	1,159	1,650	1,729	1,180	1,628	1,703
Orange	1,057	1,476	1,561	1,045	1,615	1,760	1,082	1,619	1,746
Parkes	1,110	1,586	1,693	1,096	1,570	1,732	1,132	1,685	1,855
Penrith	1,090	1,491	1,666	1,047	1,448	1,570	1,069	1,509	1,634
Port Kembla	1,120	1,442	1,537	1,109	1,484	1,548	1,166	1,655	1,764
Portland	1,122	1,583	1,623	1,122	1,510	1,635	1,151	1,602	1,714
Queanbeyan	1,136	1,682	1,815	1,135	1,747	1,879	1,169	1,827	1,956
Quirindi	1,134	1,446	1,647	1,092	1,401	1,593	1,103	1,458	1,649
Richmond	1,135	1,547	1,645	1,069	1,460	1,608	1,116	1,521	1,669
Scone	1,058	1,475	1,607	1,057	1,489	1,606	1,064	1,497	1,574
Singleton	1,080	1,445	1,534	1,098	1,460	1,592	1,177	1,539	1,621
Tamworth	1,047	1,519	1,610	1,012	1,427	1,596	1,053	1,464	1,633
Taree	1,076	1,586	1,750	1,059	1,562	1,706	1,134	1,610	1,827
Temora	1,160	1,703	1,861	1,128	1,622	1,737	1,136	1,712	1,843
Tenterfield	1,079	1,473	1,546	1,139	1,553	1,610	1,157	1,544	1,582
Tumut	1,158	1,619	1,783	1,048	1,498	1,607	1,133	1,626	1,725
Ulmarra	1,101	1,549	1,601	1,054	1,448	1,527	1,088	1,450	1,549
Wagga Wagga ..	1,068	1,776	1,989	1,065	1,707	1,822	1,066	1,770	1,800
Walcha	1,111	1,471	1,572	1,093	1,379	1,626	1,078	1,440	1,621
Wellington	1,109	1,404	1,486	1,101	1,373	1,512	1,111	1,492	1,645
Weston	1,155	1,519	1,583	1,134	1,476	1,562	1,196	1,603	1,656
Windsor	1,143	1,554	1,653	1,098	1,559	1,625	1,141	1,602	1,766
Wollongong	1,092	1,599	1,678	1,126	1,718	1,789	1,147	1,706	1,762
Wyalong	1,125	1,520	1,619	1,072	1,522	1,598	1,171	1,615	1,654
Yass	1,211	1,658	1,737	1,172	1,595	1,681	1,149	1,593	1,724
Young	1,085	1,671	1,727	1,052	1,585	1,676	1,057	1,582	1,643
Weighted Average for State	1,083	1,607	1,737	1,097	1,626	1,747	1,129	1,656	1,776
VICTORIA—									
Melbourne	1,053	1,556	1,691	1,024	1,550	1,714	1,036	1,573	1,728
Ballarat	1,066	1,366	1,506	1,047	1,321	1,489	1,040	1,316	1,485
Bendigo	1,070	1,403	1,524	1,053	1,392	1,549	1,049	1,426	1,574
Geelong	1,049	1,475	1,590	1,013	1,521	1,612	1,027	1,560	1,655
Warrnambool	1,040	1,424	1,545	1,004	1,377	1,517	1,007	1,424	1,584
Ararat	1,174	1,518	1,613	1,143	1,546	1,608	1,175	1,543	1,674
Bacchus Marsh ..	1,050	1,498	1,642	1,032	1,493	1,611	1,013	1,467	1,573
Bairnsdale	1,151	1,545	1,677	1,149	1,561	1,681	1,091	1,486	1,651
Beechworth	1,116	1,373	1,440	1,111	1,407	1,473	1,102	1,407	1,447
Benalla	1,086	1,448	1,560	1,079	1,441	1,533	1,076	1,427	1,488
Camperdown	1,098	1,515	1,647	1,081	1,520	1,621	1,072	1,445	1,587
Casterton	1,111	1,424	1,517	1,097	1,426	1,557	1,064	1,453	1,565
Castlemaine	1,111	1,427	1,550	1,081	1,340	1,485	1,079	1,334	1,481
Colac	1,070	1,591	1,728	1,046	1,588	1,709	1,025	1,558	1,685
Creswick	1,072	1,230	1,289	1,048	1,180	1,200	1,055	1,186	1,249
Daylesford	1,064	1,327	1,426	998	1,310	1,369	1,040	1,369	1,435
Dunolly	1,056	1,214	1,267	1,060	1,218	1,271	1,055	1,206	1,272

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	A	B	C	A	B	C	A	B	C
VICTORIA—*continued.*									
Echuca	1,116	1,438	1,570	1,084	1,436	1,594	1,091	1,483	1,634
Euroa	1,143	1,479	1,604	1,071	1,404	1,542	1,103	1,422	1,586
Hamilton	1,141	1,623	1,744	1,090	1,586	1,706	1,082	1,523	1,630
Healesville	1,075	1,469	1,568	1,070	1,498	1,563	1,054	1,423	1,482
Horsham	1,117	1,732	1,907	1,096	1,644	1,908	1,139	1,687	1,846
Kerang	1,118	1,688	1,797	1,093	1,619	1,773	1,096	1,629	1,820
Koroit	1,075	1,345	1,404	1,040	1,323	1,382	1,038	1,321	1,377
Korumburra	1,084	1,545	1,660	1,029	1,473	1,605	1,118	1,579	1,677
Kyneton	1,062	1,397	1,532	1,060	1,429	1,521	1,057	1,425	1,501
Lilydale	1,138	1,582	1,747	1,094	1,506	1,637	1,088	1,450	1,648
Maffra	1,023	1,615	1,747	1,042	1,700	1,798	1,031	1,632	1,722
Maldon	1,061	1,214	1,278	1,037	1,175	1,228	1,066	1,222	1,284
Maryborough	1,104	1,337	1,456	1,082	1,336	1,455	1,097	1,369	1,477
Mildura	1,152	1,784	1,926	1,131	1,774	1,873	1,136	1,757	1,906
Morwell	1,129	1,700	1,853	1,067	1,659	1,746	1,120	1,638	1,783
Nhill	1,174	1,700	1,832	1,110	1,636	1,733	1,116	1,589	1,688
Orbost	1,127	1,522	1,785	1,101	1,501	1,824	1,093	1,476	1,751
Portland	1,187	1,525	1,680	1,105	1,444	1,533	1,081	1,394	1,522
Port Fairy	1,096	1,391	1,458	1,072	1,362	1,486	1,062	1,391	1,470
St. Arnaud	1,193	1,632	1,752	1,141	1,602	1,759	1,188	1,586	1,813
Sale	1,074	1,537	1,677	1,045	1,515	1,677	1,021	1,409	1,588
Seymour	1,145	1,476	1,555	1,123	1,454	1,533	1,135	1,497	1,543
Shepparton	1,080	1,633	1,760	1,071	1,637	1,782	1,082	1,615	1,789
Stawell	1,179	1,500	1,595	1,185	1,505	1,615	1,169	1,485	1,632
Swan Hill	1,098	1,690	1,822	1,098	1,690	1,822	1,125	1,757	1,889
Terang	1,125	1,546	1,651	1,117	1,512	1,651	1,066	1,459	1,581
Traralgon	1,115	1,461	1,612	1,050	1,407	1,573	1,037	1,454	1,604
Wangaratta	1,149	1,590	1,720	1,137	1,579	1,698	1,120	1,585	1,697
Warracknabeal	1,131	1,657	1,745	1,139	1,639	1,742	1,076	1,636	1,699
Warragul	1,080	1,551	1,716	1,079	1,609	1,767	1,062	1,608	1,743
Wonthaggi	1,145	1,623	1,693	1,072	1,497	1,585	1,105	1,488	1,611
Weighted Average for State	1,062	1,539	1,671	1,033	1,531	1,686	1,043	1,550	1,700
QUEENSLAND—									
Brisbane	1,068	1,405	1,523	1,041	1,411	1,569	1,004	1,389	1,553
Toowoomba	1,051	1,359	1,505	1,022	1,362	1,491	968	1,291	1,444
Rockhampton	1,075	1,372	1,474	1,094	1,399	1,521	1,052	1,362	1,482
Charters Towers	1,156	1,422	1,510	1,217	1,484	1,579	1,200	1,481	1,542
Warwick	1,039	1,377	1,450	1,076	1,405	1,536	1,026	1,370	1,509
Ayr	1,224	1,685	1,849	1,160	1,584	1,711	1,170	1,631	1,762
Barcaldine	1,184	1,579	1,727	1,232	1,587	1,646	1,249	1,545	1,663
Bowen	1,184	1,579	1,645	1,179	1,607	1,706	1,139	1,528	1,656
Bundaberg	1,044	1,364	1,439	1,040	1,371	1,496	1,032	1,363	1,416
Cairns	1,238	1,786	1,913	1,205	1,797	1,907	1,174	1,731	1,876
Charleville	1,183	1,571	1,676	1,214	1,658	1,828	1,154	1,631	1,771
Chillagoe	1,277	1,513	1,540	1,281	1,550	1,610	1,225	1,489	1,541
Cloncurry	1,212	1,592	1,708	1,238	1,603	1,709	1,231	1,616	1,729
Cooktown	1,141	1,273	1,330	1,153	1,284	1,363	1,147	1,239	1,323
Cunnamulla	1,186	1,515	1,581	1,227	1,654	1,687	1,235	1,695	1,761
Dalby	1,051	1,412	1,495	1,063	1,431	1,524	1,011	1,350	1,449
Gayndah	1,093	1,383	1,455	1,114	1,411	1,476	1,059	1,323	1,454
Gladstone	1,109	1,385	1,437	1,097	1,352	1,492	1,040	1,303	1,435
Goondiwindi	1,139	1,554	1,643	1,113	1,519	1,607	1,092	1,473	1,566
Gympie	1,087	1,399	1,493	1,090	1,397	1,518	1,044	1,373	1,489
Hughenden	1,197	1,734	1,866	1,276	1,723	1,830	1,245	1,738	1,870
Innisfail	1,316	1,842	1,974	1,298	1,825	1,956	1,266	1,885	2,046
Ipswich	1,044	1,373	1,439	1,096	1,454	1,524	1,033	1,339	1,487
Longreach	1,177	1,561	1,646	1,260	1,654	1,760	1,252	1,613	1,772
Mackay	1,087	1,536	1,671	1,094	1,576	1,730	1,086	1,590	1,694
Maryborough	1,051	1,347	1,449	1,041	1,337	1,462	1,009	1,285	1,437
Mount Morgan	1,071	1,282	1,321	1,117	1,328	1,367	1,100	1,258	1,284
Nambour	1,085	1,458	1,541	1,103	1,520	1,623	1,080	1,441	1,586
Roma	1,109	1,468	1,545	1,135	1,534	1,644	1,053	1,416	1,571
Stanthorpe	1,153	1,548	1,614	1,155	1,484	1,537	1,015	1,337	1,528
Townsville	1,176	1,655	1,797	1,216	1,733	1,894	1,186	1,672	1,771
Winton	1,199	1,802	1,912	1,288	1,803	1,902	1,236	1,719	1,796
Weighted Average for State	1,085	1,430	1,540	1,080	1,448	1,586	1,042	1,412	1,555

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	A	B	C	A	B	C	A	B	C
SOUTH AUSTRALIA—									
Adelaide	1,067	1,567	1,688	1,056	1,541	1,641	1,079	1,567	1,702
Kadina, Moonta, etc.	1,110	1,369	1,450	1,120	1,370	1,458	1,116	1,370	1,462
Port Pirie	1,154	1,500	1,596	1,137	1,515	1,615	1,109	1,490	1,594
Mount Gambier	1,040	1,266	1,362	1,062	1,322	1,369	1,063	1,310	1,413
Peterborough	1,116	1,520	1,596	1,149	1,566	1,647	1,158	1,568	1,655
Freeling	1,105	1,473	1,539	1,073	1,487	1,586	1,063	1,424	1,490
Gawler	1,050	1,386	1,458	1,065	1,425	1,504	1,052	1,395	1,480
Kapunda	1,073	1,284	1,349	1,030	1,208	1,327	1,062	1,266	1,326
Koringa	1,101	1,298	1,386	1,074	1,272	1,360	1,090	1,419	1,485
Millicent	986	1,299	1,388	996	1,328	1,414	961	1,317	1,402
Murray Bridge	1,070	1,491	1,543	1,099	1,543	1,645	1,113	1,508	1,661
Port Augusta	1,209	1,565	1,648	1,186	1,560	1,625	1,210	1,586	1,642
Quorn	1,100	1,536	1,643	1,089	1,496	1,544	1,115	1,480	1,503
Renmark	1,231	1,708	1,840	1,206	1,654	1,763	1,191	1,651	1,743
Victor Harbour	1,102	1,635	1,777	1,085	1,592	1,750	1,078	1,604	1,802
Weighted Average for State	1,074	1,545	1,661	1,065	1,524	1,623	1,083	1,545	1,673
WESTERN AUSTRALIA—									
Perth and Fremantle	1,065	1,476	1,569	1,062	1,510	1,620	1,052	1,516	1,649
Kalgoorlie and Boulder	1,235	1,556	1,611	1,215	1,530	1,600	1,188	1,495	1,564
Northam	1,161	1,556	1,732	1,163	1,577	1,739	1,157	1,626	1,750
Bunbury	1,134	1,504	1,598	1,177	1,521	1,679	1,179	1,535	1,636
Geraldton	1,172	1,619	1,751	1,168	1,609	1,745	1,172	1,610	1,777
Albany	1,230	1,532	1,626	1,183	1,505	1,602	1,193	1,518	1,597
Beverley	1,119	1,384	1,472	1,137	1,435	1,519	1,174	1,453	1,536
Bridgetown	1,232	1,643	1,709	1,247	1,603	1,641	1,220	1,592	1,647
Broome	1,322	1,980	2,045	1,428	2,020	2,152	1,380	1,963	2,104
Carnarvon	1,329	1,823	1,921	1,301	1,795	1,926	1,327	1,821	1,985
Collie	1,236	1,598	1,664	1,205	1,596	1,639	1,237	1,723	1,764
Greenbushes	1,251	1,435	1,474	1,257	1,454	1,507	1,247	1,445	1,497
Katanning	1,089	1,473	1,553	1,114	1,466	1,574	1,088	1,444	1,548
Leonora and Gwalia	1,354	1,512	1,551	1,379	1,560	1,643	1,336	1,546	1,577
Meekatharra	1,430	1,693	1,759	1,409	1,672	1,738	1,385	1,648	1,714
Narrogin	1,160	1,643	1,792	1,156	1,639	1,788	1,131	1,671	1,789
Wagin	1,144	1,467	1,575	1,133	1,479	1,528	1,093	1,428	1,537
York	1,213	1,558	1,637	1,127	1,479	1,527	1,061	1,427	1,529
Weighted Average for State	1,103	1,499	1,590	1,098	1,522	1,627	1,087	1,525	1,648
TASMANIA—									
Hobart	1,077	1,554	1,718	1,066	1,574	1,750	1,025	1,506	1,666
Launceston	1,064	1,459	1,619	1,045	1,427	1,605	1,011	1,417	1,574
Burnie	1,110	1,575	1,689	1,079	1,529	1,595	1,052	1,473	1,600
Devonport	1,098	1,501	1,651	1,083	1,512	1,592	1,015	1,455	1,527
Queenstown	1,225	1,488	1,567	1,193	1,403	1,443	1,150	1,430	1,440
Beaconsfield	1,069	1,174	1,201	1,060	1,139	1,165	1,009	1,114	1,140
Campbelltown	1,094	1,298	1,349	1,081	1,296	1,316	1,045	1,236	1,281
Deloraine	1,023	1,352	1,418	1,014	1,389	1,428	978	1,320	1,373
Franklin	1,063	1,300	1,326	1,072	1,309	1,335	1,021	1,231	1,284
New Norfolk	1,057	1,393	1,449	1,045	1,367	1,436	998	1,333	1,406
Scottsdale	1,060	1,367	1,429	1,059	1,357	1,432	986	1,284	1,359
Ulverstone	1,082	1,411	1,510	1,057	1,321	1,452	1,026	1,335	1,460
Zeehan	1,256	1,454	1,519	1,252	1,450	1,515	1,193	1,382	1,427
Weighted Average for State	1,083	1,506	1,652	1,069	1,502	1,654	1,028	1,455	1,594
Weighted Average for Australia (200 towns)	1,077	1,549	1,675	1,072	1,556	1,687	1,082	1,570	1,703

By deducting the index-number in column A from those in column B and C, the relative aggregate expenditure on housing accommodation can be ascertained. Thus, for November, 1927, the index-number for food and groceries in Melbourne (column A) is 1,036. Subtracting this from 1,573 (column B) gives a difference of 537, which is the relative cost of house rent for houses of 4 rooms, and from 1,728 (column C) gives a difference of 692, which is the relative cost of house rent for houses of 5 rooms.

Similarly the relative cost of housing accommodation can be ascertained for each of the towns included.

A table showing the retail price index-numbers (food and groceries) for each of the thirty towns for various months since July, 1914, appeared in previous issues, but considerations of space preclude its repetition in the present issue. This table is however, given in Labour Reports issued by this Bureau.

§ 4. Variations in the Cost of Food, Groceries, Rent, Clothing, and Miscellaneous Expenditure.

1. **General.**—The index-numbers in §3 show the variations in the cost of food, groceries and house rent. The expenditure on these items covers approximately 60 per cent. of the total expenditure of the ordinary household. The balance is expended on clothing, boots, fuel, light, and such miscellaneous items as renewals of furniture, furnishings, drapery, crockery, lodge dues, trade union dues, recreation, newspapers, etc. The Royal Commission on the Basic Wage recommended in its report that a method should be adopted of ascertaining from time to time the rise and fall in the purchasing-power of money in its relation to the total household expenditure. The Government adopted the recommendation, and the duty of carrying out the necessary investigations was entrusted to the Bureau of Census and Statistics, which adopted the methods hereunder described.

2. **Methods Adopted.**—The Commission was concerned principally with the ascertainment of variations in the cost of the regimen described in the Indicator Lists published in its Report. It is clear, however, that restriction of the investigations of the Bureau of Census and Statistics in the way suggested by the Commission, would have limited their usefulness. It was decided, therefore, to apply to the extended investigation the method of index-numbers already used in the investigations into variations in the cost of food, groceries, and rent. The index-numbers may be used to determine accurately from time to time the rise and fall in the purchasing-power of money in relation to the reasonable standard of comfort for the typical family as outlined by the Commission, as well as for the determination of variations in any standard fixed by previous investigators, or which may be fixed in the future.

After careful investigation it was decided to adopt for food, groceries, and house rent, the commodities, method, and weighting used by this Bureau. The commodities and quantities adopted for food and groceries conform very closely to those given in the Indicator Lists of the Commission. With regard to rent, the Commission adopted a certain type of five-roomed house as its standard for determining the amount allowed for housing. The investigations made by this Bureau are not confined to a particular type of house, but the average rentals paid for houses of four and five rooms are taken. The results can be used with safety to show the variations in the type of house described by the Commission.

The investigations of this Bureau advisedly had been confined to food, groceries, and house rent, and it was necessary, therefore, to make investigations into the cost of clothing and miscellaneous expenditure. With regard to clothing, the Basic Wage Commission collected a large amount of information as to prices and life of articles, and this has been utilized in computing the index-numbers given in the following tables. Forms were sent out to retailers on which the prices of the articles at November, 1920, were given. These prices, so far as the capital cities are concerned (being in general the prices quoted by the firms to whom the forms were sent), are the predominant prices, i.e., the price of the grade of the articles which is most in demand. The retailers were asked to quote for November, 1921, and for May, 1922, the prices of the same articles. In order to ascertain the change in expenditure, the quantities and life as given in the Indicator Lists of the Basic Wage Commission were used for "weighting" purposes to arrive at a weekly expenditure for clothing. This weekly expenditure is then multiplied by weights in the same manner as is the weekly expenditure on rent, thus giving an aggregate expenditure comparable with the aggregate expenditure on food and groceries and on rent.

With regard to Miscellaneous Expenditure, which covers a very wide field, inquiries were made as to variations in cost of fuel and light, household utensils, drapery, crockery, etc., also with regard to other items included in the Indicator Lists for Miscellaneous Expenditure, and the aggregate expenditure on these items has been computed in the same manner as that for clothing.

The item Groceries (not Food) has been omitted from Miscellaneous Expenditure, as the index-numbers of this Bureau cover the items allowed for, such as soap, starch, blue, etc.

3. **Period Selected as Base.**—For the new series of index-numbers November, 1914, was adopted as base owing to the difficulty of securing information with regard to prices of clothing and miscellaneous items for earlier years.

4. **Variations in Cost in the Capital Cities.**[*]—The index-numbers in the following table show the variations not only in each city from period to period, but also as between the various cities at any given period. Thus, the increase in cost in the six capital cities from November, 1914, was greatest in November, 1920, when it amounted to 69.7 per cent. The increase for the year 1927, compared with November, 1914, was 45.8 per cent. Further, in 1927 the cost of the commodities and services included was greatest in Sydney (1,498) and least in Brisbane (1,342).

INDEX-NUMBERS, TOTAL HOUSEHOLD EXPENDITURE, CAPITAL CITIES.—1914 TO 1927.

(Note.—Weighted average cost in November, 1914, for all articles in capital cities taken as base = 1,000).

Cities.	November.			Year.				
	1914.	1921.	1922.	1923.	1924.	1925.	1926.	1927.
Sydney ..	1,036	1,523	1,486	1,488	1,458	1,478	1,503	1,498
Melbourne ..	976	1,460	1,402	1,460	1,420	1,432	1,453	1,44[illegible]
Brisbane ..	889	1,344	1,276	1,343	1,332	1,344	1,383	1,342
Adelaide ..	1,018	1,440	1,388	1,467	1,476	1,496	1,493	1,482
Perth	1,029	1,467	1,355	1,422	1,430	1,446	1,444	1,433
Hobart	999	1,556	1,450	1,517	1,529	1,496	1,506	1,453
Weighted Average	1,000	1,474	1,420	1,460	1,436	1,451	1,471	1,458

§ 5. Control of Trade, Prices, and House Rents.

In previous issues of the Year Book information was given as to the legislative measures enacted by Federal and State Parliaments for the control of trade, prices, and house rents.

In Queensland the Profiteering Prevention Act 1920, and the Fair Rents Act 1920, and in New South Wales the Fair Rents Act 1915, as subsequently amended, are still in force. Similar legislative measures enacted by the other States and by the Federal Parliament have been repealed or allowed to expire by effluxion of time.

B.—WAGES.

§ 1. Operations under Wages Board and Industrial Arbitration Acts.

1. **General.**—Particulars of the operations of Wages Boards and Industrial and Arbitration Courts under the Commonwealth and State Acts for the regulation of wages, hours, and conditions of labour were first compiled to the 31st December, 1913, and reviews to the end of approximately quarterly periods appear in Labour Reports and Quarterly Summaries to the 31st December, 1927.

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[*] In Labour Report No. 18, index-numbers are given showing the relative cost from November, 1922, to end of 1927, in 30 of the principal towns in Australia.

2. **Awards, Determinations, Industrial Agreements.**—The following table gives a summary for each quarter for the years 1926 and 1927 :—

AWARDS, DETERMINATIONS, AND INDUSTRIAL AGREEMENTS, 1926 AND 1927.

State and Commonwealth.	1st Quarter.		2nd Quarter.		3rd Quarter.		4th Quarter.		Full Year.	
	Awards or Determinations made.	Agreements Filed.	Awards or Determinations made.	Agreements Filed.	Awards or Determinations made.	Agreements Filed.	Awards or Determinations made.	Agreements Filed.	Awards or Determinations made.	Agreements Filed.
1926.										
New South Wales	27	21	6	17	35	6	83	7	151	51
Victoria ..	13	..	19	..	38	..	36	..	106	..
Queensland ..	25	7	20	8	11	8	34	4	90	27
South Australia	1	3	1	2	7	..	5	2	14	7
Western Australia	1	10	..	7	1	6	8	14	10	37
Tasmania ..	2	..	..	..	2	2	3	..	7	2
C'wlth. Court ..	10	10	11	8	9	6	20	6	50	30
C'wlth. Pub. Ser. Arbitrator ..	3	..	2	..	3	..	2	..	10	..
Total ..	82	51	59	42	106	28	191	33	438	154
1927.										
New South Wales	31	10	42	8	47	8	43	7	163	33
Victoria ...	16	..	18	..	17	..	23	..	74	..
Queensland ..	7	6	18	4	10	3	21	5	56	18
South Australia	2	2	7	..	1	1	5	1	15	4
Western Australia	..	8	2	6	3	7	1	36	6	57
Tasmania ..	..	..	1	..	1	..	2	..	4	..
C'wlth. Court ..	2	2	5	6	15	8	12	9	34	25
C'wlth. Pub. Ser. Arbitrator ..	1	..	..	..	..	..	..	..	1	..
Total ..	59	28	93	24	94	27	107	58	353	137

3. **Boards Authorized, Awards, etc., in Force.**—(i) *Totals for Australia.* The following table gives particulars at the dates specified for all States of Boards authorized, etc., and including operations under the Commonwealth and State Arbitration Acts, of the number of awards, determinations, and industrial agreements in force :—

BOARDS AUTHORIZED, ETC., AWARDS, ETC.—AUSTRALIA, 1913, 1926, AND 1927.

Dates.	Boards Authorized.	Boards Constituted.	Boards which had made Awards or Determinations.	Awards or Determinations in Force.(*a*)	Industrial Agreements in Force.
31st December, 1913	505	501	387(*b*)	575(*c*)	401
30th June, 1926	588	551	524	1,211	656
31st December, 1926	599	565	538	1,262	681
30th June, 1927	607	569	539	1,300	699
31st December, 1927	613	547	534	1,358	744

(*a*) Including awards made by Arbitration Courts and the Commonwealth Public Service Arbitrator. (*b*) Owing to the fact that a number of awards under the New South Wales Industrial Disputes Act (1908) were still in force, the Boards constituted for such industries under the Industrial Arbitration Act (1912) had not made any awards. (*c*) Excluding awards or determinations which expired in New South Wales (under the Act of 1908) on 31st December, 1913.

Considerable expansion of the principle of the fixation of a legal minimum rate of wage and of working conditions took place during the period under review. At the end of 1927, the number of awards or determinations and industrial agreements* in force had increased by 783 and 343 respectively over the number in force at the 31st December, 1913.

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* The registration of industrial agreements is not provided for under the Victorian Act, but such agreements may be registered and filed under the provisions of the Commonwealth Conciliation and Arbitration Act, and are operative within the State.

(ii) *Summary for States.* The following table gives particulars for each State and the Commonwealth of the number of Boards authorized, etc., for the years specified :—

BOARDS AUTHORIZED, AWARDS, ETC.—SUMMARY, 1913, 1926, AND 1927.

Particulars.	At 31st. Dec.	Commonwealth.		N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
		Court.	Pub. Ser. Arb.							
Boards Authorized, etc. (*a*)—										
Boards authorized ..	1913	..	..	(*b*) 216	135	75	56	..	23	505
	1926	..	..	291	182	2	75	..	49	599
	1927	..	..	300	183	2	76	3	49	613
Boards constituted ..	1913	..	..	(*b*) 223	132	74	51	..	21	501
	1926	..	..	291	180	2	49	..	43	565
	1927	..	..	298	176	2	25	3	43	547
Boards which have made Awards or Determinations	1913	..	..	123	123	74	47	..	19	386
	1926	..	..	265	168	..	66	..	39	538
	1927	..	..	273	169	..	53	..	39	534
Awards and Determinations—										
Awards and Determinations in force ..	1913	17	..	(*c*) 265	127	73	54	18	21	575
	1926	199	34	346	179	237	109	107	51	1,262
	1927	223	36	398	180	248	112	110	51	1,358
State Awards and Determinations—										
Applying to whole State	1913	..	..	32	8	3	..	..	15	58
	1926	..	..	54	67	66	16	5	41	249
	1927	..	..	89	66	70	16	5	41	287
Applying to Metropolitan area	1913	..	..	58	..	28	53	13	1	153
	1926	..	..	94	2	60	64	59	1	280
	1927	..	..	103	2	62	65	61	1	294
Applying to Metropolitan and Country areas ..	1913	..	..	49	105	1	..	1	5	161
	1926	..	..	133	97	47	2	10	7	296
	1927	..	..	134	99	52	2	10	7	304
Applying to Country areas	1913	..	..	126	14	41	1	4	..	186
	1926	..	..	65	13	64	27	33	2	204
	1927	..	..	72	13	64	29	34	2	214
Commonwealth Court Awards—										
Awards in force in each State	1913	..	..	13	17	15	16	9	13	..
	1926	..	..	123	144	39	111	41	78	..
	1927	..	..	131	156	41	126	46	85	..
Commonwealth Public Service Arbitrator—										
Determinations in force in each State ..	1926	..	..	32	29	27	27	27	26	..
	1927	..	..	34	29	27	27	27	26	..
Industrial Agreements—										
In force	1913	228	..	75	..	5	11	82	..	401
	1926	252	..	167	..	95	48	115	4	681
	1927	260	..	177	..	108	51	144	4	744
C'wealth Agreements in force in each State ..	1913	..	..	132	129	68	62	57	61	..
	1926	..	..	90	105	28	25	19	25	..
	1927	..	..	97	103	31	27	19	23	..

(*a*) The figures for New South Wales are exclusive of Demarcation Boards.

(*b*) Including boards which were subsequently dissolved, owing to alteration in the sectional arrangement of industries and callings.

(*c*) Omitting a number of awards which expired on the 31st December, 1913.

§ 2. Rates of Wage and Hours of Labour.

1. General.—The collection of information respecting the current rates of wage payable in different callings and in occupations in various industries was first undertaken by the Commonwealth Bureau of Census and Statistics in the early part of the year 1913. The particulars are obtained primarily from awards, determinations and agreements, under Commonwealth and State Industrial Acts, and therefore are the minimum rates prescribed. They refer generally to the capital city in each State, but in industries which obviously are not carried on in the capital cities, *e.g.*, mining, agriculture, etc., the rates in the more important centres are taken. In cases where no award, determination, or agreement is in force, particulars are taken of the ruling union or predominant rate. During recent years the number of predominant rates of wage included in the tabulations has been reduced considerably since most of the industries and occupations are now covered by awards, determinations, or industrial agreements. The total number of occupations for which particulars of wages are available back to 1901 is 652. Since 1913, when the scope of the inquiry was extended to 930 specified industries and 4,256 adult occupations (3,948 male and 308 female), the number of occupations included in the comparative computations has been kept constant.

The index-numbers for male adult workers are computed with the weighted average wage in 1911 as base (=1,000) in order that comparisons might more readily be made between these index-numbers and the retail prices index-numbers which are also computed to the year 1911 as base. In the case of females, however, it has not been possible to secure information for years prior to 1914, and the index-numbers are therefore computed with the weighted average rate of wage payable to adult female workers in Australia at 30th April, 1914, as base (=1,000).

An extensive tabular presentation of the minimum rates of wage for adult male and female workers in the main occupations in the capital city of each State is given in the Appendix to Labour Report, No. 18.

2. Weekly Rates of Wage, 1922 to 1927.—(i) *General.* The arithmetical average of the rates of wage given in the Appendix referred to furnishes the basis for the computation of relative weighted wages in the different States and industrial groups.

(ii) *Adult Males—States.* The following table gives the weighted average nominal weekly rates of wage payable to adult male workers at the 31st December in the years 1922 to 1927 for a full week's work in each State and Australia, together with index-numbers computed with the average for Australia for the year 1911 as base (=1,000).

WAGES.—ADULT MALES—WEIGHTED AVERAGE NOMINAL WEEKLY RATE PAYABLE FOR A FULL WEEK'S WORK, AND WAGE INDEX-NUMBERS, 31st DECEMBER, 1922 TO 1927.

NOTE.—Index-numbers based on the average wage for Australia in 1911 (51s. 3d.) as base (=1,000). The index-numbers in this table are comparable throughout.

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Australia. (a)
No. of Occupations included ..	874	909	627	567	489	482	3,948
				RATES OF WAGE.			
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st December, 1922 ..	91 6	91 4	93 10	87 6	93 9	88 5	91 6
31st December, 1923 ..	94 6	95 7	94 2	90 9	94 2	92 4	94 4
31st December, 1924 ..	93 6	95 5	95 9	91 10	94 8	92 6	94 3
31st December, 1925 ..	96 0	97 2	99 11	94 4	97 0	93 5	96 9
31st December, 1926 ..	100 5	99 6	100 1	95 8	98 9	94 10	99 4
31st March, 1927 ..	100 9	100 2	100 1	95 5	98 8	94 6	99 7
30th June, 1927	100 10	99 9	100 1	95 8	98 8	94 1	99 7
30th September, 1927 ..	101 2	99 8	100 1	95 6	98 8	93 9	99 7
31st December, 1927 ..	101 10	100 3	100 1	96 7	98 10	93 10	100 2
				INDEX-NUMBERS.			
31st December, 1922 ..	1,785	1,783	1,830	1,708	1,829	1,726	1,785
31st December, 1923 ..	1,844	1,865	1,837	1,770	1,838	1,802	1,840
31st December, 1924 ..	1,824	1,862	1,868	1,791	1,847	1,805	1,839
31st December, 1925 ..	1,873	1,897	1,950	1,841	1,893	1,823	1,887
31st December, 1926 ..	1,959	1,941	1,952	1,867	1,927	1,851	1,938
31st March, 1927 ..	1,966	1,955	1,952	1,861	1,925	1,843	1,944
30th June, 1927	1,967	1,947	1,953	1,867	1,924	1,836	1,942
30th September, 1927 ..	1,974	1,944	1,952	1,864	1,924	1,829	1,944
31st December, 1927 ..	1,988	1,957	1,953	1,885	1,928	1,832	1,955

(a) Weighted average.

The results show that at the 31st December, 1927, the weighted average nominal weekly rate of wage was highest in New South Wales, followed in the order named by Victoria, Queensland, Western Australia, South Australia, and Tasmania. In 1923, the average wage increased in each State. During 1924, wages decreased in New South Wales and Victoria, but there was sufficient movement in the opposite direction in the remaining States to allow the weighted average for Australia as a whole to remain practically stationary. Nominal wages showed an upward trend in all States during 1925.

During 1926, the trend of nominal wages was progressively upward in all States, with the exception of the final quarter, when all States except New South Wales and Western Australia showed decreases. The steady rise however continued in the weighted average wage for Australia, mainly due to the substantial rise in New South Wales in the final quarter. The upward tendency was again manifest during 1927 in all States excepting Queensland and Tasmania. In the former State the weighted average nominal wage remained stationary throughout the year, whilst in the latter there was a gradual decline. The weighted average for Australia, however, rose during the 4th quarter. The largest percentage increase during the period under review was in New South Wales with 11.3 per cent.; followed by South Australia, 10.4 per cent.; Victoria, 9.8 per cent.; Queensland, 6.7 per cent.; Tasmania, 6.1 per cent.; and Western Australia. 5.4 per cent. The increase in the weighted average for Australia was 9.5 per cent.

(iii) *Adult Males—Industrial Groups.* The following table shows (*a*) the average weekly rate of wage in each of the fourteen industrial groups, (*b*) the weighted average wage for all groups combined, and (*c*) index-numbers based on the average wage for all groups in 1911 (51s. 3d.), as base (=1,000):—

WAGES.—ADULT MALES—WEIGHTED AVERAGE NOMINAL WEEKLY RATE FOR A FULL WEEK'S WORK, AND WAGE INDEX-NUMBERS IN EACH INDUSTRIAL GROUP, 31st DECEMBER, 1923 TO 1927.

NOTE.—Index-numbers for each industrial group and all industrial groups, based on the average wage for all groups in 1911 (51s. 3d.), as base (=1,000). The index-numbers in this table are comparable throughout.

Industrial Group.		Weighted Average Nominal Weekly Rate of Wage, and Index-Number at—							
		31st Dec., 1923.	31st Dec., 1924.	31st Dec., 1925.	31st Dec., 1926.	31st March, 1927.	30th June, 1927.	30th Sept., 1927.	31st Dec., 1927.
		s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
I. Wood, Furniture, etc.	Wage ..	99.2	99.7	101.2	104.5	104.4	104.0	104.1	104.6
	Index-No.	1,935	1,943	1,973	2,037	2,036	2,028	2,031	2,039
II. Engineering, etc.	Wage ..	97.4	97.5	100.4	102.0	101.10	101.8	101.8	102.10
	Index-No.	1,900	1,901	1,957	1,991	1,986	1,984	1,984	2,006
III. Food, Drink, etc.	Wage ..	94.2	94.0	96.6	98.9	98.8	98.7	98.10	99.8
	Index-No.	1,837	1,835	1,888	1,926	1,925	1,924	1,929	1,944
IV. Clothing, Boots, etc.	Wage ..	93.11	93.0	93.2	96.6	97.8	97.7	97.3	98.3
	Index-No.	1,833	1,815	1,817	1,883	1,905	1,905	1,898	1,917
V. Books, Printing, etc.	Wage ..	104.5	108.3	109.6	111.5	112.1	113.9	113.5	113.7
	Index-No.	2,037	2,113	2,137	2,173	2,188	2,219	2,214	2,216
VI. Other Manufacturing	Wage ..	96.2	95.6	98.2	100.6	100.6	100.1	100.2	100.4
	Index-No.	1,876	1,863	1,915	1,961	1,960	1,953	1,955	1,977
VII. Building ..	Wage ..	103.8	105.6	108.5	110.9	111.2	111.3	111.2	112.10
	Index-No.	2,023	2,058	2,115	2,160	2,170	2,171	2,169	2,202
VIII. Mining, etc. ..	Wage ..	104.5	104.2	108.7	109.6	109.4	109.5	109.4	109.9
	Index-No.	2,037	2,033	2,119	2,137	2,134	2,135	2,133	2,142
IX. Railways, etc. ..	Wage ..	97.8	96.11	100.6	102.6	102.4	101.11	101.9	103.1
	Index-No.	1,906	1,892	1,962	2,001	1,996	1,989	1,985	2,012
X. Other Land Transport	Wage ..	92.6	89.4	93.3	95.6	95.2	95.5	95.5	97.4
	Index-No.	1,806	1,744	1,820	1,863	1,857	1,861	1,862	1,900
XI. Shipping, etc. (*a*)	Wage ..	102.4	97.10	104.8	103.7	103.0	102.5	102.2	103.7
	Index-No.	1,997	1,908	2,043	2,020	2,010	1,998	1,993	2,021
XII. Agricultural, etc. (*b*)	Wage ..	85.8	85.10	87.4	93.5	94.4	94.4	94.9	94.3
	Index-No.	1,671	1,675	1,704	1,823	1,841	1,841	1,848	1,839
XIII. Domestic, etc. (*b*)	Wage ..	84.6	86.0	89.1	90.10	90.10	91.0	91.8	93.3
	Index-No.	1,648	1,678	1,738	1,772	1,772	1,775	1,789	1,820
XIV. Miscellaneous ..	Wage ..	92.3	92.2	93.11	95.6	95.10	95.8	95.8	96.0
	Index-No.	1,800	1,798	1,833	1,863	1,870	1,867	1,867	1,872
All Industrial Groups (*c*)	Wage ..	94.4	94.3	96.9	99.4	99.7	99.7	99.7	100.2
	Index-No.	1,840	1,839	1,887	1,938	1,944	1,942	1,944	1,955

(*a*) Including the value of victualling and accommodation where supplied. (*b*) Including the value of board and lodging where supplied. (*c*) Weighted average.

The foregoing table shows that the rate of increase in the weighted average weekly wage in occupations and callings classified in the fourteen industrial groups during the period 31st December, 1923 to 1927, was greatest in Group XIII. (Domestic, etc.), 10.4 per cent.; followed in the order named by Group XII. (Agricultural, etc.), 10.1 per cent.; Groups VII. (Building) and V. (Books, Printing, etc.), 8.8 per cent.

The smallest increase occurred in Group XI. (Shipping, etc.), 1.2 per cent. In four of the groups the increase was more, and in ten groups less than the increase in the weighted average for all groups. Compared with 1926, increases were recorded in all industrial groups with the exception of Group XI. (Shipping), which remained stationary. The increase was greatest in Group XIII. (Domestic, etc.), 2.7 per cent.; followed by X. (Other Land Transport), 2.0 per cent.; VII. (Building), 1.9 per cent.; whilst the smallest increase occurred in Group I. (Wood, Furniture, etc.), 0.1 per cent. The weighted average wage for all groups combined increased by 0.9 per cent.

(iv) *Adult Females—States.* The following table shows the weighted average weekly rate of wage payable to adult female workers for a full week's work in each State and Australia at the dates specified. Index-numbers are given also for each State based on the average weekly wage at the end of each of the periods indicated, computed with the weighted average wage for all States at the 30th April, 1914, as base (=1,000).

WAGES.—ADULT FEMALES—WEIGHTED AVERAGE NOMINAL WEEKLY RATE PAYABLE FOR A FULL WEEK'S WORK, AND WAGE INDEX-NUMBERS, 31st DECEMBER, 1922 TO 1927.

NOTE.—Index-numbers based on the average wage for Australia at the 30th April, 1914 (27s. 2d.) as base (=1,000). The index-numbers in this table are comparable throughout.

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Australia.(*a*)
No of Occupations Included ..	85	87	37	47	24	28	308
RATES OF WAGE.							
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st December, 1922 ..	47 8	48 0	48 2	44 0	56 4	47 7	47 11
31st December, 1923 ..	49 3	49 5	50 5	46 4	56 4	48 6	49 6
31st December, 1924 ..	49 1	49 7	50 10	46 6	56 11	50 3	49 7
31st December, 1925 ..	49 8	50 8	51 9	48 10	57 6	50 2	50 7
31st December, 1926 ..	50 8	51 11	52 10	50 0	58 6	51 8	51 8
31st March, 1927 ..	51 0	52 2	53 2	50 4	58 6	52 1	52 0
30th June, 1927	51 1	52 2	53 10	50 4	58 6	52 0	52 1
30th September, 1927 ..	52 3	52 6	53 5	49 11	58 6	52 7	52 7
31st December, 1927 ..	53 0	52 7	53 5	49 11	58 8	52 7	52 10
INDEX-NUMBERS.							
31st December, 1922 ..	1,754	1,767	1,771	1,620	2,075	1,751	1,763
31st December, 1923 ..	1,812	1,819	1,855	1,704	2,075	1,785	1,821
31st December, 1924 ..	1,807	1,824	1,872	1,710	2,094	1,850	1,826
31st December, 1925 ..	1,827	1,866	1,904	1,796	2,116	1,845	1,861
31st December, 1926 ..	1,865	1,911	1,944	1,839	2,152	1,902	1,902
31st March, 1927 ..	1,878	1,921	1,958	1,854	2,152	1,916	1,914
30th June, 1927	1,880	1,921	1,980	1,853	2,152	1,915	1,917
30th September, 1927 ..	1,922	1,932	1,965	1,838	2,152	1,935	1,934
31st December, 1927 ..	1,950	1,934	1,966	1,838	2,160	1,935	1,945

(*a*) Weighted average.

As in the case of male occupations, female wages increased rapidly up to December, 1921, but in 1922 reductions were recorded. The decrease over the whole of Australia was relatively much less than in the case of males. There was an increase in each State during 1923, with the exception of Western Australia, where the wages remained stationary. The upward tendency was continued during 1924 with increases in all States with the exception of New South Wales. Further increases were recorded during 1925, with the exception of Tasmania, while all States showed a rise in 1926. This increase was maintained during 1927 in all States, with the exception of South Australia, where the weighted average wage declined from 50s. to 49s. 11d. The advance in the Australian average during the period under review was 10.3 per cent.

(v) *Adult Females—Industrial Groups.* The following table gives particulars of the weighted average weekly rate of wage payable to adult female workers in the industrial groups in which they are mainly employed, and in all groups combined. Taking the average wage for all groups at the 30th April, 1914, as base (=1,000), index-numbers are given computed on the average rate of wage ruling at the end of each period indicated.

WAGES.—ADULT FEMALES—WEIGHTED AVERAGE NOMINAL WEEKLY RATE PAYABLE FOR A FULL WEEK'S WORK, AND WAGE INDEX-NUMBERS IN EACH INDUSTRIAL GROUP, 31st DECEMBER, 1922 TO 1927.

NOTE.—Index-numbers for each Industrial Group and all Industrial Groups, based on the average wage for all groups at 30th April, 1914 (27s. 2d.), as base (=1,000). The index-numbers in this table are comparable throughout.

Date.	Industrial Group.					
	III. Food, Drink, etc.	IV. Clothing, Boots. etc.	I., II., V. and VI., All Other Manufacturing.	XIII. Domestic, Hotels, etc. (a).	XIV. Miscellaneous.	All Groups. (b).
	RATES OF WAGE.					
	s. d.	s. d.	s. d	s. d.	s. d.	s. d.
31st December, 1922 ..	43 3	47 10	47 4	48 3	48 9	47 11
31st December, 1923 ..	44 1	50 1	48 10	49 5	49 6	49 6
31st December, 1924 ..	45 2	49 7	49 6	49 7	50 7	49 7
31st December, 1925 ..	45 8	50 1	51 2	51 0	52 0	50 7
31st December, 1926 ..	47 8	51 7	52 10	52 0	52 0	51 8
31st March, 1927 ..	47 8	52 2	52 8	52 0	52 3	52 0
30th June, 1927 ..	47 6	52 3	52 8	52 4	52 3	52 1
30th September, 1927..	48 2	52 5	53 0	53 5	52 8	52 7
31st December, 1927 ..	48 9	52 7	53 2	54 5	52 8	52 10
	INDEX-NUMBERS.					
31st December, 1922 ..	1,593	1,762	1,741	1,777	1,794	1,763
31st December, 1923 ..	1,622	1,842	1,799	1,819	1,821	1,821
31st December, 1924 ..	1,661	1,826	1,821	1,824	1,862	1,826
31st December, 1925 ..	1,682	1,844	1,884	1,877	1,914	1,861
31st December, 1926 ..	1,754	1,900	1,943	1,912	1,914	1,902
31st March, 1927 ..	1,754	1,921	1,938	1,912	1,922	1,914
30th June, 1927 ..	1,747	1,922	1,938	1,927	1,922	1,917
30th September, 1927..	1,773	1,930	1,950	1,966	1,937	1,934
31st December, 1927 ..	1,793	1,936	1,958	2,001	1,937	1,945

(a) Including the value of board and lodging, where supplied. (b) Weighted average.

The greatest increase in the weekly rate of wage during the period under review occurred in Groups III. (Food, Drink, etc.) and XIII. (Domestic, Hotels, etc.), 12.6 per cent., followed in the order named by Groups I., II., V., and VI. (All Other Manufacturing), 12.5 per cent.; Group IV. (Clothing, Boots, etc.), 9.9 per cent.; and XIV. (Miscellaneous), 8.0 per cent. The weighted average weekly rate for all groups was 10.3 per cent. higher at the end of 1927 than at the 31st December, 1922.

During the year 1927 wages in all groups maintained an upward trend as compared with 1926, the greatest increase occurring in Group XIII., 4.7 per cent., followed by Group III., 2.2 per cent.; Group IV., 1.9 per cent.; Group XIV., 1.2 per cent.; and Groups I., II., V., and VI., 0.7 per cent. The weighted average for all groups increased by 2.3 per cent.

3. **Relative Hours of Labour and Hourly Rates of Wage, 1923 to 1927.**—(i) *General.* The rates of wage referred to in preceding paragraphs relate to the minimum payable for a full week's work. The number of hours constituting a full week's work differs, however, in many instances between various trades and occupations in each State, and between the same trades and occupations in the several States. In order to secure what may be for some purposes a more adequate standard of comparison, it is desirable to reduce the comparison to a common basis, viz., the rate of wage per hour. Particulars are given in the following table classified according to States, for male and female occupations separately, at the end of the years 1923 to 1927. These particulars relate to (a) the weighted average nominal weekly wage, (b) the weighted average number of working hours constituting a full week's work, and (c) the weighted average hourly wage. The weighted average weekly wage relates to all industrial groups combined, and includes the value of board and lodging where supplied in land occupations, and the value of victualling in marine occupations, whereas the number of working hours and the hourly wage relate to all industrial groups other than Groups XI. (Shipping), and XII. (Agricultural, Pastoral, etc.). Many of the occupations included in these two groups are of a casual or seasonal nature, and the hours of labour in the agricultural and dairying industry are not generally regulated

either by awards or determinations of industrial tribunals or otherwise, hence the necessary data for the computation of the average number of working hours are not available.

The general effect of reducing the rates of wage to a common basis (*i.e.*, per hour) is to eliminate on comparison any apparent difference between the several States which may be due to unequal working time.

(ii) *Adult Males and Females.* Particulars for the last five years for adult males and females are given in the table hereunder :—

WEEKLY AND HOURLY WAGES AND HOURS OF LABOUR.—ADULT WORKERS, 1923 TO 1927.

Date.	Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aus.
		MALE WORKERS.						
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st Dec., 1923	Weekly Wage (*a*) ..	94 6	95 7	94 2	90 9	94 2	92 4	94 4
	Working Hours (*b*) ..	46.73	47.06	45.51	47.00	46.66	47.27	46.70
	Hourly Wage (*b*) ..	2/0¾	2/1	2/1¼	1/11½	2/0½	1/11¾	2/0¾
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st Dec., 1924	Weekly Wage (*a*) ..	93 6	95 5	95 9	91 10	94 8	92 6	94 3
	Working Hours (*b*) ..	46.75	46.99	45.40	46.98	46.52	47.26	46.66
	Hourly Wage (*b*) ..	2/0½	2/1	2/1¾	1/11¾	2/0¾	1/11¾	2/0¾
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st Dec., 1925	Weekly Wage (*a*) ..	96 0	97 2	99 11	94 4	97 0	93 5	96 9
	Working Hours (*b*) ..	46.76	46.98	43.88	46.97	46.26	47.25	46.44
	Hourly Wage (*b*) ..	2/1¼	2/1½	2/3¾	2/0½	2/1½	2/-	2/1½
		s. d.	s d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st Dec., 1926	Weekly Wage (*a*) ..	100 5	99 6	100 1	95 8	98 9	94 10	99 4
	Working Hours (*b*) ..	44.55	46.94	43.95	46.95	45.80	47.27	45.57
	Hourly Wage (*b*) ..	2/3¼	2/2	2/4	2/0¾	2/2¼	2/0½	2/2¼
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st Dec., 1927	Weekly Wage (*a*) ..	101 10	100 3	100 1	96 7	98 10	93 10	100 2
	Working Hours (*b*) ..	44.44	46.82	43.96	46.78	45.75	47.16	45.46
	Hourly Wage (*b*) ..	2/3¾	2/2¼	2/4	2/1¼	2/2¼	2/0¼	2/2¾
		FEMALE WORKERS.						
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st Dec., 1923	Weekly Wage ..	49 3	49 5	50 5	46 4	56 4	48 6	49 6
	Working Hours ..	45.81	46.13	45.60	46.10	45.97	47.86	45.98
	Hourly Wage ..	1/1	1/0½	1/1¼	1/0	1/2¾	1/0¼	1/1
		s. d.	s. d.	s. d.	s d.	s. d.	s. d.	s. d.
31st Dec., 1924	Weekly Wage ..	49 1	49 7	50 10	46 6	56 11	50 3	49 7
	Working Hours ..	45.98	46.08	45.60	46.10	45.97	47.86	46.02
	Hourly Wage ..	1/0¾	1/1	1/1½	1/-	1/2¾	1/0½	1/1
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st Dec., 1925	Weekly Wage ..	49 8	50 8	51 9	48 10	57 6	50 2	50 7
	Working Hours ..	46.17	45.83	44.00	46.10	45.57	47.86	45.78
	Hourly Wage ..	1/1	1/1¼	1/2	1/0¾	1/3¼	1/0½	1/1¼
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st Dec., 1926	Weekly Wage ..	50 8	51 11	52 10	50 0	58 6	51 8	51 8
	Working Hours ..	44.02	45.60	44.01	46.10	45.57	47.86	44.94
	Hourly Wage ..	1/1¾	1/1¾	1/2½	1/1	1/3½	1/1	1/1¾
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
31st Dec., 1927	Weekly Wage ..	53 0	52 7	53 5	49 11	58 8	52 7	52 10
	Working Hours ..	44.02	45.58	44.01	46.10	45.57	47.86	44.94
	Hourly Wage ..	1/2½	1/1¾	1/2½	1/1	1/3½	1/1¼	1/2

(*a*) Weighted average weekly rate in all Industrial groups combined. (*b*) Weighted average working hours per week, and computed hourly rates of wage for all industrial groups excepting Groups XI. (Shipping, etc.), and XII. (Agricultural, Pastoral, etc.). Working hours have not been generally regulated by industrial tribunals for occupations classified in industrial groups XI. and XII.

(iii) *Index-numbers.* There was a diminution in each of the States during the year 1921 in the number of working hours constituting a full week's work for male and female occupations, but during 1922 and 1923 certain increases in hours were recorded, principally in New South Wales. The tendency in a majority of the States during the years 1924, 1925, and 1926 has been towards a slight reduction in hours of labour, particularly in Queensland and New South Wales, where a 44-hour week became operative on 1st July, 1925, and on 4th January, 1926, respectively. Further decreases were recorded in the hours of work per week for male employees during 1927 in all States excepting Queensland, where hours remained stationary. The decline in the other States was due mainly to the reduction of the standard hours of labour in Group II. (Engineering, etc.) from 48 to 44 hours per week, as awarded by the Commonwealth Court of Conciliation and Arbitration. The hours of work per week for female employees remained practically unchanged during the year. The effect of these changes on the hourly rate of wage as compared with the general increase in the weekly wage is readily seen from the comparative index-numbers given in the following table. In each instance (male and female occupations separately) the basis taken is the weighted average for Australia at the 30th April, 1914 (= 1,000).

WEEKLY AND HOURLY WAGE INDEX-NUMBERS.—ADULT WORKERS, 1923 TO 1927.

Note.—Weighted average for Australia at 30th April, 1914, as base (=1,000).

Date.	Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Australia.
	Male Workers.							
31st Dec., 1923	Weekly Wage ..	1,714	1,734	1,703	1,646	1,709	1,675	1,711
	Hourly Wage (a) ..	1,775	1,790	1,808	1,676	1.754	1,696	1,771
31st Dec., 1924	Weekly Wage ..	1.696	1,731	1,737	1,665	1,717	1.679	1,710
	Hourly Wage (a) ..	1,761	1,790	1,838	1,709	1,771	1,706	1,774
31st Dec., 1925	Weekly Wage ..	1,741	1,763	1,813	1,712	1,760	1,695	1,755
	Hourly Wage (a) ..	1,808	1,823	1,988	1,761	1,827	1,723	1,829
31st Dec., 1926	Weekly Wage ..	1,821	1,805	1.815	1,735	1,791	1,721	1.802
	Hourly Wage (a) ..	1,944	1.864	1,997	1,776	1,878	1,746	1,900
31st Dec., 1927	Weekly Wage ..	1,848	1,819	1,816	1.753	1,792	1.703	1,817
	Hourly Wage (a) ..	1,980	1,880	1,998	1,800	1,882	1,731	1.920
	Female Workers.							
31st Dec., 1923	Weekly Wage ..	1,812	1,819	1,855	1,704	2,075	1,785	1,821
	Hourly Wage ..	1,943	1,937	1,997	1,815	2,215	1,831	1,944
31st Dec., 1924	Weekly Wage ..	1,807	1,824	1,872	1,710	2,094	1,850	1,826
	Hourly Wage ..	1,929	1,943	2,017	1,821	2,236	1,898	1,949
31st Dec., 1925	Weekly Wage ..	1,827	1,866	1,904	1,796	2,116	1,845	1,861
	Hourly Wage ..	1,944	2,000	2,125	1,913	2,280	1,893	1,995
31st Dec., 1926	Weekly Wage ..	1,865	1,911	1,944	1,839	2,152	1,902	1,902
	Hourly Wage ..	2,080	2,059	2,169	1,959	2,319	1,952	2,078
31st Dec., 1927	Weekly Wage ..	1,950	1,934	1,966	1,838	2.160	1,935	1,945
	Hourly Wage ..	2,175	2,084	2,193	1.958	2.327	1,985	2.125

(a) See footnote to following table.

4. Weighted Average Nominal Weekly Hours of Labour, Adult Males.—The following table shows the weighted average nominal hours of labour (exclusive of overtime) in a full working week for male workers in each State and Australia at the 31st December, 1923 to 1927. Index-numbers are given also for each State based on the weekly average hours at the end of each of the periods specified, computed with the weighted average hours of labour for Australia at the 30th April, 1914, as base (=1,000).

HOURS OF LABOUR.—WEEKLY INDEX-NUMBERS, ADULT MALES, 1923 TO 1927.

Note.—Index-numbers based on the average hours of labour for Australia at the 30th April, 1914 (48.93) as base (=1,000). The index-numbers in this table are comparable throughout. Overtime is excluded.

Date.	Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Australia.
31st Dec., 1923	Weighted average weekly hours of labour (a) ..	46.73	47.06	45.51	47.00	46.66	46.27	46.70
	Index-numbers ..	955	962	930	961	954	966	954
31st Dec., 1924	Weighted average weekly hours of labour (a) ..	46.75	46.99	45.40	46.98	46.52	47.26	46.66
	Index-numbers ..	955	960	928	960	951	966	954
31st Dec., 1925	Weighted average weekly hours of labour (a) ..	46.76	46.98	43.88	46.97	46.26	47.25	46.44
	Index-numbers ..	956	960	897	960	945	966	949
31st Dec., 1926	Weighted average weekly hours of labour (a) ..	44.55	46.94	43.95	46.95	45.80	47.27	45.57
	Index numbers ..	910	959	898	960	936	966	931
31st Dec., 1927	Weighted average weekly hours of labour (a) ..	44.44	46.82	43.96	46.78	45.75	47.16	45.46
	Index numbers ..	908	957	898	956	935	964	929

(a) Weighted average working hours per week for all industrial groups excepting Groups XI. (Shipping), and XII. (Agricultural, Pastoral, etc.), in which working hours have not been generally regulated by industrial tribunals.

Each State, excepting New South Wales, shows a decrease for both 1924 and 1925 while, for 1926, four of the States show decreases, the remaining two, Queensland and, Tasmania, showing minor increases on account of further industries being brought under Commonwealth Arbitration Court awards, under which the prescribed hours are greater than in the corresponding State awards. The weighted average weekly hours index-number for Australia at the 31st December, 1927, was 929, as compared with 1,000 at 30th April, 1914, a reduction of 7.1 per cent. The lowest weighted average nominal weekly hours index-number at the 31st December, 1927, was that for Queensland (898), followed in the order named by New South Wales (908), Western Australia (935), South Australia (956), Victoria (957), and Tasmania (964).

5. **Nominal and Effective Wages, 1901 to 1927.**—(i) *Nominal Weekly Wage Index-numbers—States.* The following table shows the progress in nominal weekly rates of wage for all industries in each State, the weighted average rate for Australia in 1911 being taken as the base (=1,000). These results are based generally upon rates of wage prevailing in the capital city of each State, but in certain industries, such as mining, rates are necessarily taken for places other than the capital cities.

NOMINAL WAGE INDEX-NUMBERS, ADULT MALES, 1901 TO 1927.

(WEIGHTED AVERAGE WAGE FOR AUSTRALIA IN 1911 = 1,000.)

States.	Number of Occupations included. 1901 to 1912.	Number of Occupations included. 1913 to 1927.	1901.	1911.	1914.	1919.	1920.	1921.	1922.	1923.	1924	1925.	1926.	1927.
New South Wales ..	158	874	858	1,003	1,096	1,498	1,835	1,869	1,785	1,844	1,824	1,873	1,959	1,988
Victoria	150	909	796	985	1,065	1,404	1,679	1,826	1,783	1,865	1,862	1,897	1,941	1,957
Queensland.. ..	87	627	901	997	1,042	1,534	1,785	1,886	1,830	1,837	1,868	1,950	1,952	1,953
South Australia ..	134	567	819	1,013	1,062	1,373	1,613	1,745	1,708	1,770	1,791	1,841	1,867	1,885
Western Australia ..	69	489	1,052	1,152	1,226	1,516	1,751	1,853	1,829	1,838	1,847	1,893	1,927	1,928
Tasmania	54	482	719	799	1,028	1,346	1,674	1,788	1,726	1,802	1,805	1,823	1,851	1,832
Australia (*a*) ..	652	3,948	848	1,000	1,085	1,462	1,752	1,844	1,785	1,840	1,839	1,887	1,938	1,955

(*a*) Weighted average.

NOTE.—The figures in the above table are comparable both horizontally and vertically.

During the period 1911 to the end of the year 1927 the average weekly rate of wage in New South Wales increased 98 per cent., in Victoria, 99 per cent., in Queensland, 96 per cent., in South Australia, 86 per cent., in Western Australia, 67 per cent., and in Tasmania, 129 per cent., while the weighted average weekly rate for Australia increased 96 per cent.

(ii) *Effective Weekly Wage Index-numbers—States.* In comparing wages, two elements are of obvious importance, viz., (i) hours worked per day or week, and (ii) the cost of commodities and housing. Thus 60s. per week of 60 hours represents the same hourly rate as 48s. per week for 48 hours. Similarly, if the cost of commodities and housing increases 25 per cent., *e.g.*, if the prices index-number rises from 1,000 to 1,250, then 60s. per week (the index-number being 1,250) is effectively equal only to 48s. (when the index-number was 1,000). Or, again, if the prices index-number falls from 1,000 to 750, then 60s. per week, when the index-number is 750, would have the same purchasing power as 80s. when the index-number was 1,000. Ignoring for the present the number of hours worked, and assuming that the real value of the average wages is to be measured by their purchasing power, the actual average wages paid may be reduced to their effective value by applying the prices index-numbers to the nominal wages index-numbers. The following table shows the effective wage index-numbers so ascertained in each State for each of the years indicated from 1901 to 1927.

In computing these effective wage index-numbers for years prior to 1914, the nominal wage index-numbers given in the preceding table have been divided by the price index-numbers in Section A, §2. The resulting index-numbers show for each State and for Australia for the years specified the variations in effective wages. The nominal wage index-numbers for these earlier years are based on rates of wage current at the end of December, the only data available. For the years 1914 onward, however, the nominal wage index-numbers used are based on the average wage for the four quarters in each year, and in this respect differ from those in the preceding sub-sections. However, so far as the years 1901 and 1911 are concerned, as the movement in wages during any one year prior to 1914 was very slight, it is possible that if the wage data were available in quarters, the index-numbers used would approximate very closely to those based on averages for the year.

EFFECTIVE WEEKLY WAGE INDEX NUMBERS.—ADULT MALES, 1901 TO 1927.(*a*)

States.	1901.	1911.	1914.	1919.	1920.	1921.	1922.	1923.	1924.	1925.	1926.	1927.
New South Wales ..	961	973	906	875	911	1,079	1,113	1,040	1,069	1,048	1,035	1,079
Victoria	915	1,037	961	904	875	1,038	1,102	1,036	1,097	1,073	1,069	1,095
Queensland	1,172	1,090	1,038	990	1,036	1,244	1,273	1,214	1,232	1,241	1,183	1,222
South Australia	948	957	929	901	853	1,027	1,090	1,036	1,051	1,053	1,076	1,073
Western Australia ..	1,024	1,023	1,070	1,008	1,012	1,139	1,226	1,192	1,161	1,162	1,165	1,199
Tasmania	827	838	942	840	830	977	1,053	1,000	1,017	1,044	1,037	1,072
Australia (*b*) ..	964	**1,000**	948	907	911	1,076	1,126	1,062	1,095	1,081	1,072	1,102

(*a*) As to the effect in abnormal periods, see Labour Report No. 6, pp. 20–2, Section IV., par. 3.
(*b*) Weighted average.

In the table above the effective wage index-numbers are computed to the one base, that of Australia for 1911. Subject to the qualification already referred to, which, as has been pointed out, does not materially affect the figures, the index-numbers are comparable in all respects, and comparisons may be made as to the increase or decrease in the effective wage index-number for any State over a period of years. Thus, comparing 1927 with 1901, and also with 1911, there has been an increase in the effective wage in all States.

(iii) *Effective Wages and Standard of Comfort.* In the preceding table particulars are given as to variations in effective wages in each State, due allowance having been made for variations in retail prices of commodities, though not for unemployment.

For years prior to 1913 the data available as to unemployment are so meagre that comparative results allowing for variations both in prices of commodities and in unemployment cannot be accurately computed for the several States. In the next table, for these earlier years the percentage of unemployment in Australia and the nominal wage index-numbers relate to the end of the year. For 1914 and subsequent years the wages, index-numbers, percentages of unemployment, and retail prices index-numbers are the average for the year. Column I. shows the nominal wage index-numbers, and Column II. the relative percentages unemployed. Applying these percentages to the numbers shown in Column I., and deducting the results from each corresponding index-number to allow for relative loss of time, the figures in Column III. are obtained. These figures are then re-computed with the year 1911 as base, and are shown in Column IV. In Column V. the retail prices index-numbers are shown, and in Columns VI. and VII. the effective wage index-numbers are given, firstly, for full work, and secondly, allowing for lost time. These are obtained by dividing the figures in Columns I. and IV. respectively by the corresponding figure in Column V. The resulting index-numbers show for Australia for the years specified the variations in effective wages, or in what may be called the "standard of comfort."*

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* This expression must not be confused with "standard of living." A change in the standard of living necessarily involves a change in regimen (*see* Labour Report No. 4), that is, a change in the nature or in the relative quantity of commodities purchased, or both. A change in the "standard of comfort" merely implies a variation in effective wages, which variation may, or may not, result in, or be accompanied by, a change in the "standard of living."

A comparison between the figures in Columns I. and VI. gives the relation between the normal rates of wage and the purchasing efficiency of these rates. The figures in Column VII. show variations in effective wages after allowing not only for variations in purchasing power of money, but for the relative extent of unemployment also.

WAGE INDEX-NUMBERS, NOMINAL AND EFFECTIVE, 1901 TO 1927.(*a*)

Year.	I.	II.	Rate of Wage Index-Numbers, Allowing for Lost Time.		V.	Effective Wage Index-Numbers.	
	Nominal Wage Index-Numbers.	Percentage Unemployed.	III. Actual.	IV. Re-computed. (1911 = 1,000).	Retail Price Index-Numbers.	VI. Full Work.	VII. Allowing for Unemployment.
1901 ..	848	6.6	793	832	880	964	945
1906 ..	866	6.7	808	848	902	960	940
1907 ..	893	5.7	842	884	897	996	986
1908 ..	900	6.0	846	888	951	946	934
1909 ..	923	5.8	870	913	948	974	963
1910 ..	955	5.6	901	945	970	985	974
1911 ..	**1,000**	4.7	953	**1,000**	**1,000**	**1,000**	**1,000**
1912 ..	1,051	5.5	993	1,042	1,101	955	946
1913 ..	1,076	5.3	1,021	1,071	1,104	975	970
1914 ..	1,081	8.3	991	1,040	1,140	948	912
1915 ..	1,092	9.3	990	1,039	1,278	854	813
1916 ..	1,144	5.8	1,078	1,131	1,324	864	854
1917 ..	1,226	7.1	1,139	1,195	1,318	930	907
1918 ..	1,270	5.8	1,196	1,255	1,362	932	921
1919 ..	1,370	6.6	1,280	1,343	1,510	907	889
1920 ..	1,627	6.5	1,521	1,596	1,785	911	894
1921 ..	1,826	11.2	1,621	1,701	1,697	1,076	1,002
1922 ..	1,801	9.3	1,634	1,715	1,600	1,126	1,072
1923 ..	1,805	7.1	1,677	1,760	1,700	1,062	1,035
1924 ..	1,840	8.9	1,676	1,759	1,681	1,095	1,046
1925 ..	1,861	8.8	1,697	1,781	1,722	1,081	1,034
1926 ..	1,914	7.1	1,778	1,866	1,786	1,072	1,045
1927 ..	1,946	7.0	1,810	1,899	1,766	1,102	1,075

(*a*) As to the effect in abnormal periods, see Section IV., par. 3, of Labour Report No. 6.

NOTE. For years prior to 1914, the nominal wage index-numbers and the percentage unemployed relate to the end of the year only, but from 1914 onward these figures, in addition to those for retail prices, are averages for the whole year.

Compared with 1911 the effective wage in 1901 was 3.6 per cent. less for full work, and 5.5 per cent. less after allowance for unemployment. In connexion with the index-numbers in Column VII., unemployment was less in 1911—the base year—than in any other year. During the period 1912 to 1920, while wages increased steadily, prices increased at a greater rate, with the result that the purchasing power of wages was less in each of these years than in 1911, the lowest point reached being in 1915, when the full time index-number was 14.6 per cent. less, or, allowing for unemployment, 18.7 per cent. less than for the base year. The first occasion on which the effective wage was higher than in 1911 was in 1921, when wages increased considerably while prices declined, the increase in effective wages being 7.6 per cent., but only 0.2 per cent. allowing for unemployment. Unemployment reached its " peak " during 1921. Both wages and prices fell in 1922, but the former less than the latter, resulting in a further increase in the effective wage. As wages remained practically stationary while prices rose, the effective wage for 1923 showed a decline. A rise in wages coincided with a fall in prices during 1924 and the effective wage increased, but as the average unemployment was higher than in the preceding year the increase in the effective wage was greater for full work than allowing for unemployment. Wages and prices both rose during 1925 and 1926, the latter in 1926 reaching their highest point for the period under investigation. Unemployment remained stationary in 1925, but as prices rose more rapidly than the rise in nominal wages, effective wages decreased In 1926, unemployment decreased, and, although prices again rose more rapidly than nominal wages, the effective wage allowing for unemployment increased. Effective wages for full time work, however, again decreased. In 1926 the effective wage allowing for unemployment was 4.5 per cent., and working full time 7.2 per cent. higher than in 1911. During 1927 nominal wages rose, whilst prices fell, and as the percentage of unemployed showed a slight decline, the result was a rise in the effective wage index-number for full work and in the index-number allowing for unemployment. During the year the latter index-number reached its highest point, whilst the former has only been exceeded on one occasion, viz., in 1922. The effective wage for full time work was 10.2 per cent., and allowing for unemployment, 7.5 per cent., higher during 1927 than in 1911.

§ 3. International Comparison of Real Wages.

1. **General.**—In July, 1923, the British Ministry of Labour published index-numbers of real wages in London and in the capital cities of certain other countries. The method of computation adopted is described in the *Ministry of Labour Gazette*, and may be briefly stated as " the ascertaining of the quantities of each kind of food of working class consumption that could be purchased in each city at the retail prices there current with the wages payable for a given amount of labour measured in hours."

In consequence of a resolution passed at the International Conference of Labour Statisticians in November, 1923, these comparisons, with certain modifications, are being continued by the International Labour Office.

2. **Real or Effective Wages in Various Capital Cities.**—The following table taken from the *International Labour Review* has been varied by the addition of index-numbers for Melbourne, and index-numbers based on quantities of food consumption in Australia. In the column added, index-numbers have been computed for London, Melbourne, Ottawa, Philadelphia, and Sydney only, and not for the other cities included in the table. The work of computing such index-numbers is considerable, and the effect of using the Australian regimen may be gauged from the results shown for the cities referred to. The method of computation may be briefly explained as follows.

A regimen consisting of a certain number of food items commonly in use in all the countries has been selected, and the prices of these commodities have been multiplied by a quantity representing the weekly consumption of such commodities in the various countries. The result gives what may be described as the cost of a weekly family basket of commodities in the various cities specified, according to usage in that city and according to usage in other countries. A common working week of 48 hours is then assumed for all the cities included in the tabulation, and a weekly wage determined by taking the average hourly earnings of a number of occupations. The cost of the regimen is then divided into the wage thus ascertained, and index-numbers are computed on the basis of the numbers of times the food regimen can be purchased by the average wage in each city. The result in the case of London is taken as base and made equal to 100, the index-numbers for the other cities being then ascertained by proportion. The resultant index-numbers represent approximately the relative effectiveness of wages in the various cities.

Attention is drawn in the *International Labour Review*, however, to the unsatisfactory nature of the wage statistics in some cities, and the results, therefore, must be taken as an approximation only of the relation between the cities specified.

Particular note should also be made of the fact that, although for the purpose of making the computation a working week of 48 hours is assumed, the result is really a comparison on the basis of hourly rates, the actual weekly earnings depending of course on the number of hours worked per week in the different industries in the cities mentioned.

INDEX NUMBERS OF COMPARATIVE REAL WAGES IN VARIOUS CITIES—JULY, 1927.

(Base : London = 100.)

City.	Index-numbers based on quantities of Food Consumption in—							General Average Index-Numbers (based on food only).
	Belgium and France.	Central European Countries.	Great Britain.	Southern European Countries.	Scandinavian Countries.	Oversea Countries.	Australia.	
Amsterdam	89	85	82	87	95	88	..	87
Berlin ..	61	70	64	65	76	70	..	67
Brussels ..	49	44	46	47	53	48	..	48
Copenhagen	95	103	103	102	126	110	..	106
Dublin ..	98	102	105	99	103	103	..	102
Lisbon ..	32	32	30	30	29	31	..	31
Lodz ..	37	44	37	39	51	44	..	42
London ..	100	100	100	100	100	100	100	100
Madrid ..	55	55	51	54	54	54	..	54
Melbourne	143	152	146	139	120	144	152	142
Milan ..	49	62	48	52	54	43	..	52
Ottawa ..	147	156	157	148	170	163	159	157
Paris ..	55	53	49	52	60	52	..	53
Philadelphia	169	166	181	175	197	188	177	179
Prague ..	45	44	44	47	48	47	..	46
Riga ..	43	54	45	45	53	50	..	48
Rome ..	44	45	38	44	48	43	..	43
Stockholm	87	86	91	88	106	101	..	92
Sydney ..	142	143	150	143	126	150	155	144
Tallinn (Estonia) ..	41	51	39	42	54	48	..	46
Vienna ..	35	42	38	38	48	43	..	41
Warsaw ..	34	40	32	35	43	39	..	37

The results appear to show that the general relationship is practically the same whichever regimen is taken.

The cities which have the highest index-numbers are, in the order named, Philadelphia, Ottawa, Sydney, Melbourne, Copenhagen and Dublin.

Taking the last column, which gives the average of the seven preceding columns, the effective wage in Philadelphia is 79 per cent., in Ottawa 57 per cent., in Sydney 44 per cent., in Melbourne 42 per cent., and in Copenhagen 6 per cent. above the effective wage in London, while the effective wage in Amsterdam is 13 per cent., in Brussels 52 per cent., and in Berlin 33 per cent. below the effective wage in London.

§ 4. The Basic Wage and Child Endowment in Australia.

1. **The Basic Wage.**—(i) *General.* The "basic wage" in Australia is understood to mean the lowest wage which can be paid to an unskilled labourer on the basis of "the normal needs of an average employee regarded as a human being living in a civilized community."* This wage is fixed by various industrial tribunals in Australia operating under Federal and State Arbitration Acts, and is varied from time to time according to changes in cost of living, constitution of the family unit, etc. In addition to the "basic" wage, these tribunals also determine what is known as the "secondary" wage "the extra payment to be made for trained skill or other exceptional qualities necessary for an employee exercising the functions required."†

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* Mr. Justice Higgins—*A New Province for Law and Order.* † Ibid.

(ii) *History in Australia.* The doctrine of a basic wage was propounded as far back as 1890 by Sir Samuel Griffith, Premier of Queensland, when he incorporated in a Parliamentary Bill a clause to the following effect, viz. :—

> "The natural and proper measure of wages is such a sum as is a fair immediate recompense for the labour for which they are paid, having regard to its character and duration; but it can never be taken at a less sum than such as is sufficient to maintain the labourer and his family in a state of health and reasonable comfort.
>
> It is the duty of the State to make provision by positive law for securing the proper distribution of the net products of labour in accordance with the principles hereby declared."

The Bill in question did not become law, but the same principle was enunciated in the New South Wales Arbitration Court in somewhat similar terms by Mr. Justice Heydon in 1905. In spite, however, of these pronouncements and the fact that wage-fixing tribunals had been in operation as early as 1896 (in the State of Victoria) it was not until the year 1907 that the first basic wage, as such, was declared by a Court in Australia. This declaration was made by Mr. Justice Higgins, President of the Commonwealth Court of Conciliation and Arbitration, and is popularly known as the "Harvester Judgment" on account of its having been determined in connexion with H. V. McKay's Sunshine Harvester Works. The rate of wage declared in this case was 7s. per diem or £2 2s. per week for Melbourne, the amount considered reasonable for a "a family of about five." The constituent parts of this amount were £1 5s. 7d. for food, 7s. for rent, and 9s. 5d. for all other expenditure.

The above rate has been varied from time to time in accordance with the Retail Price Index Numbers prepared by the Commonwealth Bureau of Census and Statistics for the city or town in which the persons affected are employed. The present weekly wage rates (at 1st May, 1928) for the various capital cities as so varied are as follows :—

	£	*s.*	*d.*
Sydney	4	11	6
Melbourne	4	8	0
Brisbane (*a*)	3	19	6
Adelaide	4	7	6
Perth (*a*)	4	0	0
Hobart	4	2	6
Six Capitals (Weighted Average)	4	8	0

(*a*) These rates are not prevalent in these cities, because the basic rates fixed by State tribunals are higher.

The above amounts include the sum of 3s. per week which was added in 1921 for the purpose of securing to the worker during a period of rising prices the full equivalent of the "Harvester" standard.

The adequacy or otherwise of the amount allotted under the "Harvester" judgment has been the subject of much discussion, the author of the judgment himself urging on several subsequent occasions the need for its review. The upset from the war, however, placed such an inquiry out of the question. Whatever its limitations, the Harvester judgment proved a great boon during the war years by providing a basis for variation according to changes in cost of living and a foundation upon which "margins for skill" could be imposed.

(iii) *Awards in Operation.*—The basic wage rates fixed by State arbitration tribunals vary from those obtaining in the Federal sphere not only as regards amount, but also in respect of constitution of family unit whose needs it purports to supply.

The awards of various State tribunals in operation at the present moment are shown in the following statement. The industrial tribunals in Queensland, South Australia, and Western Australia made no alteration during 1927 in the basic rates of wage previously declared.

State.	Basic Wage.		Date of Operation.	Family Unit (for Male Rate).
	Males.	Females.		
	£ s. d.	£ s. d.		
New South Wales ..	(a)4 5 0	2 6 0	1.7.27	Man and wife
Victoria	(b)	(b)	(b)	(b)
Queensland ..	4 5 0	2 3 0	28.9.25	Man, wife, and three children
South Australia ..	4 5 6	1 19 6	1.7.25	(c)
Western Australia ..	4 5 0	2 5 11	1.7.26	(c)
Tasmania	(b)	(b)	(b)	(b)

(a) Plus child allowances referred to hereafter. The basic rate for rural workers is £4 4s. per week.

(b) None declared, but follow Federal rates to large extent.

(c) Although the family unit is not specifically defined in the legislation of these States, the tribunals appointed to determine the basic wage have adopted the unit of man, wife and two children.

(iv) *Royal Commission on the Basic Wage, 1920.*—The Federal basic wage referred to in paragraph 2 was made operative in other parts of Australia on the basis of the relative Retail Price Index-Numbers applicable to the locality, but only one comprehensive attempt has been made by the Federal authorities to ascertain specifically what the actual requirements were in the various States according to reasonable standards of comfort, including all matters comprised in the ordinary expenditure of a household in respect of a family consisting of a man, wife and three children under fourteen years of age.

The attempt referred to was made by a Royal Commission, and their report, issued in 1920, recommended the following amounts for the various capital cities, viz. :—

	£ s. d.	£ s. d.
Sydney	5 17 1	(5 2 8) (a)
Melbourne	5 16 6	(4 19 4)
Brisbane	5 6 2	(4 13 2)
Adelaide	5 16 1	(5 1 9)
Perth	5 13 11	(5 1 1)
Hobart	5 16 11	(4 14 10)
Six Capitals (Weighted Average)	5 15 8	(5 0 4)

(a) The figures in brackets represent the equivalent amounts at the 1st February, 1928, according to the variation in the appropriate Retail Price Index-Numbers.

The recommendations of this Commission were not given effect to owing to the marked advance of the amounts suggested over ruling rates* and the grave doubts expressed as to the ability of industry to pay such rates.

2. **Child Endowment.**—(i) *General.* The principle of supplementing wages by a payment in respect of dependent children under fourteen years of age has become very prominent in Australia in recent years, and is actually in operation in certain instances The system has been in force in various forms in England and on the Continent as far back as 1795, the first instance occurring in England in that year.†

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* The "Harvester" equivalent for Melbourne at the time (September quarter, 1920) was £4 13s. per week, but only £3 18s. to £4 2s. was being paid on the basis of an annual index-number.

† A complete survey of the systems in force in various countries is contained in Elinor Rathbone's *Disinherited Family : A Plea for the Endowment of the Family.*

(ii) *The New South Wales Scheme.* The earliest attempt made in Australia to institute the system was in New South Wales in 1919, when a Bill was introduced into the State Parliament to provide a flat basic wage for a man and wife, and an allowance of 5s. per week for each child, the latter rate to be reduced on a sliding scale and to cease automatically when the income reached an amount of £3 per week above the basic wage. The Bill was rejected, and the matter dropped until the Session of 1926–27, when measures providing for the payment of child allowances became law.* These measures provide for (*a*) the declaration of a basic wage for a man and wife,† and (*b*) the payment of an allowance of 5s. per week in respect of each dependent child, subject to the provision that child allowances would only be paid to the extent by which the total earnings of the worker and his family fall short of the sum represented by the *basic wage* plus child allowance at the rate of 5s. per week for each child. Thus a worker with three dependent children receiving £5 by way of wages would not be entitled to the allowance, but would receive it in respect of a fourth child. These payments in New South Wales commenced to operate from 1st September, 1927. The fund from which these payments are made was created by a levy of 3 per cent. on the wages bill of employers, with a rebate of 10 per cent. in respect of workers employed under Federal awards.

(iii) *Commonwealth Public Service.*—The first payment of child endowment allowances in Australia‡ was in connexion with the Commonwealth Public Service. Following upon the Report of the Royal Commission on the Basic Wage in 1920 (referred to above) the Prime Minister (Rt. Hon. W. M. Hughes, P.C.) asked the Chairman (A. B. Piddington, K.C.) to submit a scheme to give effect to the recommendations, and Mr. Piddington suggested splitting up the amount recommended into a flat rate of £4 per week for a man and wife, and 12s. per week for each child, with an appropriate levy (about 10s. 9d. per worker per week) on all employers to finance the scheme. The Commonwealth Government decided to apply this scheme to the Commonwealth Public Service, and from 1st November, 1920, a flat rate basic wage of £4 per week and child endowment at the rate of 5s. per week for each dependent child under fourteen years of age was paid to officers, with a limitation of £400 per annum by way of salary plus allowance. This system of payment remained in force until 1923, when, owing to no adjustments of the basic wage according to Retail Price Index-Numbers having taken place in the interim, the Government was sometimes paying over, and sometimes under, the true "Harvester" equivalent of wages, notwithstanding child allowance, which averaged £10 per annum per adult employee. At the time of its grant by the Commonwealth Government the Prime Minister stated that it was not suggested that the amount of 5s. per week was sufficient, but any adjustment was a matter for the Commonwealth Public Service Arbitrator.

The question was not considered by the Arbitrator until 1923, when the problem of amalgamating war-time cost of living allowances, married men's allowances, &c., was before him. The Arbitrator granted to the Service the full equivalent of the "Harvester" wage as a flat basic wage for single and married adults, based upon the Retail Price Index-Number for the six capital cities for the year ended 31st March, 1923, deducting therefrom the averaged value per adult employee of child endowment (£10). By this process the net basic wage for the Service was £195 per annum with an allowance of £13 per annum in respect of each dependent child under fourteen years of age. It will be realized from the foregoing that the Arbitrator by his method altered the principle of paying these allowances as an addition to the basic wage to one whereby the officers, by suffering an all-round deduction of £10§ per annum, mutually created a fund from which the allowance was paid. Thus, for the first time in history, the basic wage was split up and distributed according to the family or economic needs of the employee.

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* *Family Endowment Act* 1927; *Finance (Family Endowment Tax) Act* 1927; *Industrial Arbitration (Living Wage Declaration) Act* 1927.

† This was subsequently declared at £4 5s. per week for adult males and £2 6s. per week for adult females. A separate rate for rural employees was declared later at £4 4s. per week.

‡ The payment of a single maternity bonus of £5 to the mother of any viable child or children delivered at a birth was instituted by the Commonwealth Government on 10th October, 1912, and up to 30th June, 1927, 1,952,640 claims have been paid in this respect, representing a total expenditure of £9,763,200.

§ By subsequent increase of the average number of children per adult employee, the deduction is now £12 per annum.

The payment of the allowance in the Service is now limited to a sum derived from salary and allowance of £500 per annum. The system propounded by Mr. Piddington, and put into effect in a somewhat different form by the Public Service Arbitrator, was not approved by industrial workers, whose objective was the highest flat basic wage obtainable for the "average" employee, although compared with the rates being paid at the time it was estimated that the acceptance of Mr. Piddington's system would have meant a considerable gain to the workers in child allowances, with practically no change in the basic wage rate on the basis of £4 per week for a single or married adult employee and 12s. per week for each dependent child under fourteen.

(iv) *National Scheme.* The Federal Government, in June, 1927, called a conference at Melbourne of the Premiers of the several States to consider the question from a national stand-point. The Prime Minister submitted various estimates of cost of endowing dependent children under fourteen years of age in Australia at 5s. per week, ranging from £24,437,000 for all such, to £7,578,000 per annum for only those in excess of two in family—as an addition on the basic wage—with modifications of those estimates if salary limits were imposed. It was estimated that if income were limited to £500 the above amounts would be reduced by 2 per cent.; with a limit of income of £400 the reduction would be 5 per cent.; and with a limit of £300 the reduction would equal 8 per cent. If, on the other hand, the scheme took the form of that in operation in the Federal Public Service, i.e., by an all-round deduction from the "Harvester" basic wage to provide the fund from which to pay the allowances plus administrative expenses, then the amount of such deduction would be per adult male approximately 5s. 4d. per week. After discussion it was decided to refer the matter to a Royal Commission to be appointed by the Commonwealth Government.

This Commission commenced its sittings in Brisbane on 31st October, 1927, and will take evidence in each State: The terms of reference to the Commission are as follows, viz.:—

The Commission will inquire and report on the following questions:—

1. The general question of the institution of a system of child endowment or family allowances in Australia, with particular reference to its social and economic effects, and, if the institution of such a system is recommended.
2. The methods by which such a system should be established.
3. The relation of such a system to wage fixation, having regard to the interest of the wage earner, of industry generally, and of the community.
4. The application of a system of child endowment or family allowances to persons whose wages are not regulated by law, or who are not engaged in industry as wage earners.
5. The limit of income, if any, subject to which payment by way of child endowment or family allowances should be made.
6. The methods of financing or giving effect to a system of child endowment or family allowances, with particular reference to the practicability and desirability of providing the necessary funds from public revenue, from industry, or from both sources, and in what proportion and upon what principle.
7. The methods of administering such a system.
8. The cost of such a system, including administrative expenses and reserves, if thought necessary.
9. The legal methods of giving effect to any system recommended, with particular reference to the existing distribution of Commonwealth and State powers.
10. Any matters of public interest which may arise as the result of the institution of a system of child endowment or family allowances.

The following comprised the personnel of the Commission, viz.:—T. O'Halloran, Esq., K.C. (Chairman); J. A. Curtin, Esq.; Ivor Evans, Esq.; Mrs. M. Muscio; and Stephen Mills, Esq., C.M.G.

§ 5. Changes in Rates of Wage.

1. **General.**—A change in rate of wages is defined as a change in the weekly rates of remuneration of a certain class of employees, apart from any change in the nature of the work performed and apart from any revision of rates due to increased length of service or experience. It is obvious that under this definition certain classes of changes are excluded, such, for example, as (*a*) changes in rates of pay due to promotion, progressive increments, or, on the other hand, to reduction in pay or grade to inefficient workers, and (*b*) changes in average earnings in an occupation due to a change in the proportions which more highly-paid classes of workers bear to those paid at lower rates. Bonuses to employees have not been taken into account in the tabulations. Each single change recorded relates to a change in the rates of wage effected in a specific industry or calling, and includes any and all changes to workers in that industry, irrespective of the different number of separate occupations or trades affected. Moreover, in some instances a change may relate to the employees of a single employer or to those of a number of employers, according to the instrument or method operating to bring about the change.

There is a certain amount of overstatement as regards " persons affected," since in the quarterly adjustments of wages the same persons may figure on four occasions. The difficulty of eliminating this factor has, however, been found too great to justify the labour involved. A further complication also arises from the overlapping of Commonwealth and State awards.

2. **Effect of Changes.**—(i) *General.* The following tables give particulars of changes which occurred in each State during the years specified. As regards the number of persons affected, the figures refer to the total number of persons ordinarily engaged in the various industries, and the results as to the amount of increase in wages are computed for a full week's work for all persons ordinarily engaged in the several industries and occupations affected. In cases of changes in existing minimum rates under awards or determinations of industrial tribunals, it has been assumed (in the absence of any definite information to the contrary) that the whole of the employees in each occupation received the minimum rates of wage before and after the change.

The figures given in regard to the amount of increase per week do not relate to the increase each week, but only to the increase in a single week on the assumption that the full number of persons ordinarily engaged in the particular trade or occupation affected by the change were employed during that week. It is obvious, therefore, that the aggregate effect per annum cannot be obtained without making due allowance for unemployment and for occupations in which unemployment is seasonal or intermittent. It is also clear that since unemployment and activity in all branches of industry may vary from year to year, and in many branches from season to season also, no accurate estimate of the actual effect of the changes in the total amount of wages received or paid per annum can be made until the determining factors have been investigated. These factors are (*a*) the amount of unemployment, and (*b*) the period of employment in seasonal industries.

Changes brought about by awards and agreements under the Commonwealth Conciliation and Arbitration Act, the Arbitration (Public Service) Act, and the Industrial Peace Act 1920, are necessarily included hereunder as changes in each State to which such awards and agreements apply. The average increase per head per week is computed to the nearest penny.

(ii) *Summary—States, 1927.* The following table gives particulars of the changes in rates of wage in each State during the year 1927.

CHANGES IN RATES OF WAGE.—EFFECT IN EACH STATE, 1927.

State.	Increases.		Decreases.		Total Result of all Changes.		
	Work-people Affected.	Increase per Week.	Work-people Affected.	Decrease per Week.	Work people Affected.	Net Increase per Week.	Average Increase per Week.
		£		£		£	s. d.
New South Wales ..	486,226	47,164	156,121	8,553	642,347	38,611	1 3
Victoria	172,723	21,090	230,431	12,149	403,154	8,941	0 5
Queensland	7,864	1,162	1,388	92	9,252	1,070	2 4
South Australia ..	72,023	6,312	37,749	2,054	109,772	4,258	0 9
Western Australia ..	13,511	1,525	5,167	337	18,678	1,188	1 3
Tasmania	4,844	416	22,515	1,442	27,359	(b) 1,026	(b) 0 9
Northern Territory ..	413	113	35	6	448	107	4 9
Federal Capital Territory	261	41	..	..	261	41	3 2
Common to all States (a)	14,074	898	38,647	1,090	52,721	(b) 192	(b) 0 1
Total	771,939	78,721	492,053	25,723	1,263,992	52,998	0 10

(a) See footnote (a) at bottom of page. (b) Decrease.

The preceding figures for changes in wages include all those which have occurred either through the operations of wage tribunals or as the result of direct negotiations between employers and employees. Many workers in all States come under the jurisdiction of awards made by the Federal Arbitration Court. The principle of quarterly adjustments adopted by that Court caused a large number of variations in rates of wage in all States during the year.

(iii) *Australia, 1923 to 1927.* The following table gives separate particulars of the effect of increases and decreases in rates of wage in Australia during the years 1923 to 1927 :—

CHANGES IN RATES OF WAGE.—EFFECT IN AUSTRALIA, 1923 TO 1927.

Year.	Increases.		Decreases.		Total Result of all Changes.		
	Work-people Affected.	Increase per Week.	Work-people Affected.	Decrease per Week.	Work-people Affected.	Net Increase per Week.	Average Increase per Head per Week.
		£		£		£	s. d.
1923	820,856	125,379	169,996	21,361	990,852	104,018	3 0
1924	337,823	85,616	509,832	44,250	847,655	41,366	1 0
1925	1,124,095	130,220	138,114	10,793	1,262,209	119,427	1 11
1926	951,490	117,814	270,270	30,194	1,221,760	87,620	1 4
1927	771,939	78,721	492,053	25,723	1,263,992	52,998	0 10

CHANGES IN RATES OF WAGE.—EFFECT, STATES, 1923 TO 1927.

Particulars.		N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	F.C.T.	(a) All States.	Aust.
No. of Persons Affected	1923	519,440	276,094	30,051	63.209	32,057	25,918	71	1,002	43,010	990,852
	1924	196,066	338 761	52,975	111,261	40,598	26,144	35	30	81,785	847,655
	1925	514,123	343.123	184,595	113,721	40.152	18,566	26	243	47.660	1,262,209
	1926	525,801	429,605	32,953	103,291	38,271	25,378	53	63	66,345	1,221,760
	1927	642,347	403,154	9,252	109,772	18,678	27,359	448	261	52,721	1,263,992
		£	£	£	£	£	£	£	£	£	£
Total Net Amount of Increase per Week	1923	53,868	36,934	b2,177	9,784	b69	1,755	b20	298	8,645	104,018
	1924	7,860	7,312	13,993	7,835	1,879	1,335	15	1	1,136	41,366
	1925	40,780	19,968	43,975	9,693	3,199	293	b9	133	1,395	119 427
	1926	43,471	27,920	5,081	4,597	4,164	748	20	11	1,608	87,620
	1927	38,611	8,941	1,070	4,258	1,188	b1,026	107	41	b192	52,998
		s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Average Increase per Head per Week	1923	2 9	2 8	b1 5	3 11	b0 1	1 4	b5 8	5 11	1 9	3 0
	1924	0 10	0 5	5 3	1 5	0 11	1 0	8 7	0 8	0 3	1 0
	1925	1 7	1 2	4 9	1 8	1 7	0 4	b6 11	10 11	0 7	1 11
	1926	1 8	1 4	3 1	0 11	2 2	0 7	7 7	3 6	0 6	1 4
	1927	1 3	0 5	2 4	0 9	1 3	b0 9	4 9	3 2	b0 1	0 10

(a) Changes recorded in this column are common to all States, as the particulars relating to the number of workpeople affected and the net amount of increase per week in each State were not ascertainable. (b) Decrease.

The relative positions of the States in regard to the number of workers affected in each year naturally depend largely on the magnitude of the different industries and callings in which changes took place.

(iv) *Industrial Groups—Australia. Workpeople affected by Changes.* In the following table particulars are given of the number of changes, the number of persons (males and females) affected, and the total amount of increase per week, classified according to Industrial Groups throughout Australia during the years 1923 to 1927 :—

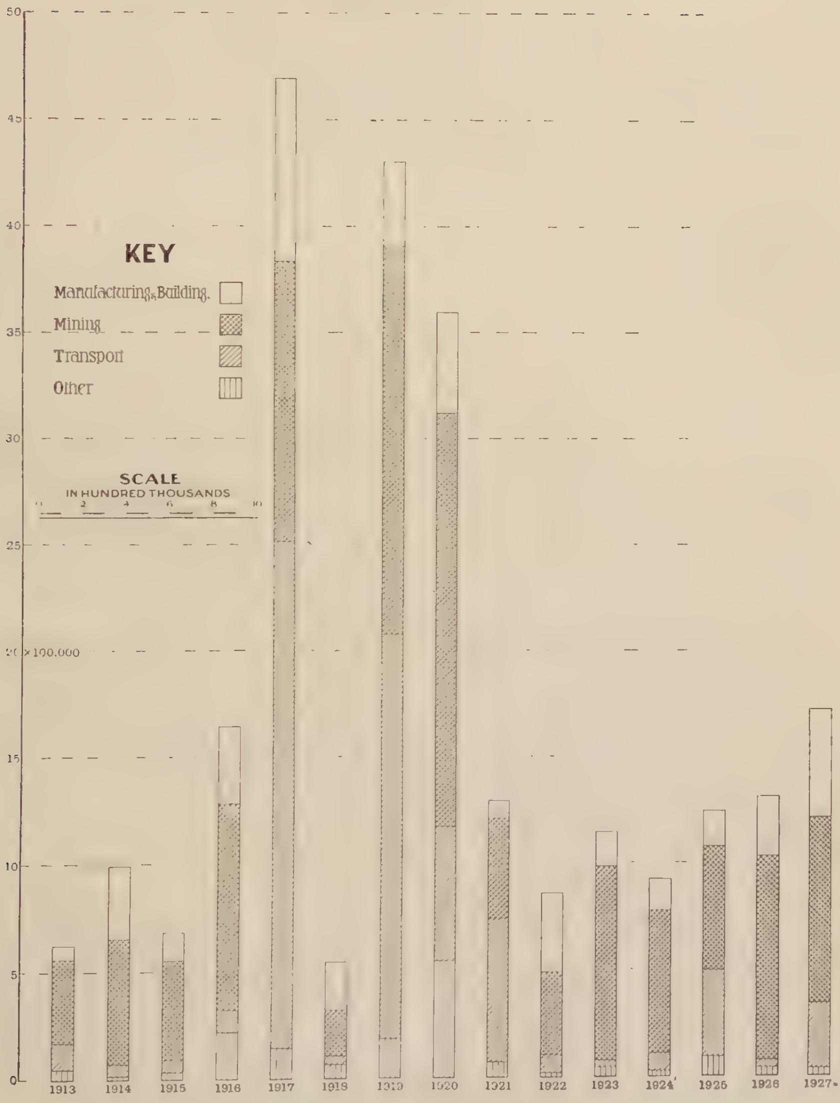
CHANGES IN RATES OF WAGE.—INDUSTRIAL GROUPS, AUSTRALIA, 1923 TO 1927.

Particulars.		Industrial Groups.							
		I. Wood, Furniture, Timber, etc.	II. Engineering, Metal Works, etc.	III. Food, Drink, Tobacco, etc.	IV. Clothing, Hats, Boots, etc.	V. Books, Printing, etc.	VI. Other Manufacturing.	VII. Building.	VIII. Mines, Quarries, etc.
1923.									
Number of Persons affected	..	60,724	102,475	72,851	19,593	10,445	82,785	79,685	18,223
Amount of Increase per week	£	6,209	12,258	3,594	*a*333	1,021	9,144	13,034	828
1924.									
Number of Persons affected	..	62,728	79,067	43,685	55,155	8,803	78,843	66,596	12,100
Amount of Increase per week	£	*a*2,506	*a*2,270	2,713	4,103	4,246	*a*1,881	7,806	580
1925.									
Number of Persons affected	..	95,720	123,669	68,596	40,202	16,224	115,692	121,549	31,373
Amount of Increase per week	£	7,905	9,500	7,609	1,444	1,128	8,407	10,149	4,108
1926.									
Number of Persons affected	..	60,422	96,677	43,416	98,659	21,157	92,324	132,012	57,650
Amount of Increase per week	£	1,669	850	4,180	5,334	2,513	4,231	14,848	8,123
1927.									
Number of Persons affected	..	30,217	142,440	50,680	164,207	18,800	109,938	98,307	30,440
Amount of Increase per week	£	657	5,451	3,835	4,468	1,070	3,626	3,194	1,348

Particulars.		Industrial Groups—*continued.*						
		IX. Rail and Tram Services.	X. Other Land Transport.	XI. Shipping, etc.	XII. Pastoral, Agricultural, etc.	XIII. Domestic, Hotels, etc.	XIV. Miscellaneous.	ALL GROUPS.
1923.								
Number of Persons affected	..	155,830	23,510	79,466	24,720	21,724	238,821	990,852
Amount of Increase per week	£	11,990	237	6,873	9,647	3,117	26,399	104,018
1924.								
Number of Persons affected	..	86,961	43,343	94,110	13,989	7,607	194,668	847,655
Amount of Increase per week	£	6,544	1,555	*a*5,350	4,749	1,834	19,243	41,366
1925.								
Number of Persons affected	..	188,752	27,249	77,285	55,495	37,472	262,931	1,262,209
Amount of Increase per week	£	18,196	3,435	5,656	10,577	4,239	27,074	119,427
1926.								
Number of Persons affected	..	283,101	27,019	90,685	13,160	1,066	204,412	1,221,760
Amount of Increase per week	£	20,227	2,404	2,416	552	369	19,904	87,620
1927.								
Number of Persons affected	..	242,994	28,945	72,802	45,985	20,101	208,136	1,263,992
Amount of Increase per week	£	4,821	2,346	*a*218	5,315	3,083	14,002	52,998

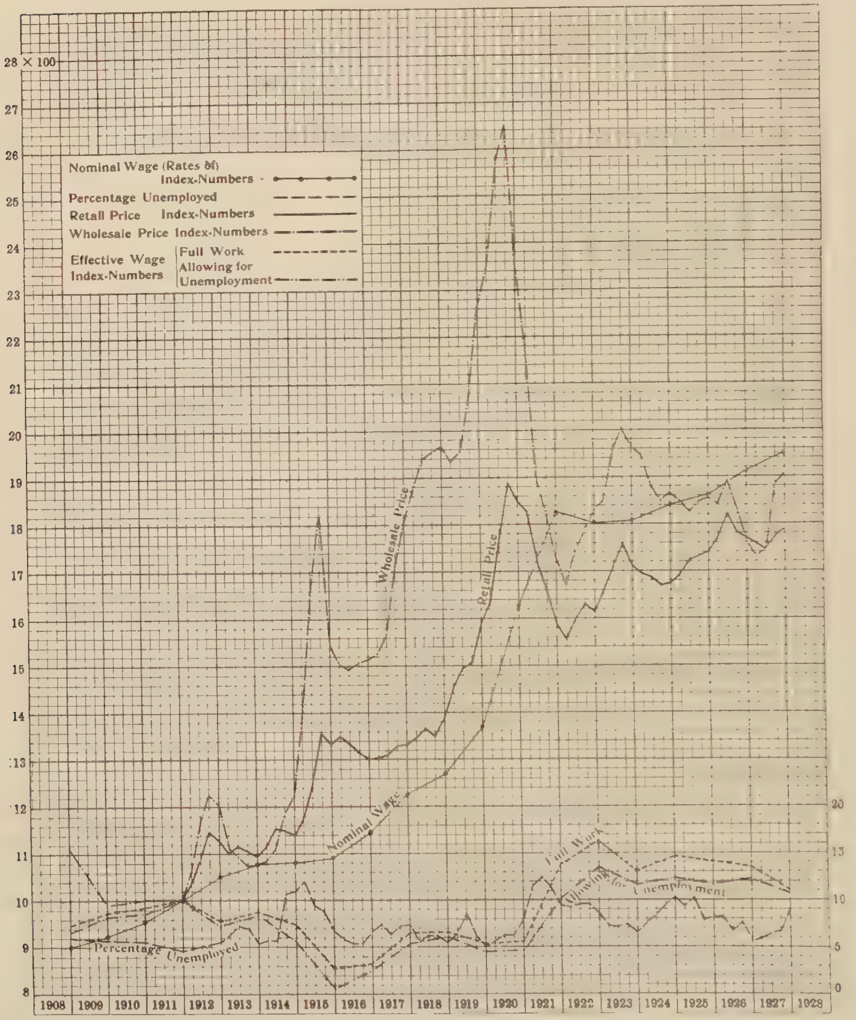
(*a*) Decrease.

Industrial Disputes - Working Days Lost in Various Industrial Groups



EXPLANATION.—The scale refers to working days lost in hundred thousands. Thus, taking the year 1917, and comparing the shaded and blank sections with the scale, it will be observed that about 870,000 working days were lost in Manufacturing and Building, over 1,300,000 in Mining, over 2,300,000 in Transport, and about 150,000 in other industries.

RETAIL AND WHOLESALE PRICES, NOMINAL AND EFFECTIVE WAGE INDEX-NUMBERS, AND PERCENTAGE OF UNEMPLOYED.—AUSTRALIA, 1908 TO 1927.



NOTE.—The figures on the right represent the scale for the percentage unemployed according to trade-union returns. The figures on the left represent the scale for the several index-numbers, the year 1911 being taken in each case as base (= 1000). Since the end of the year 1911, the Retail Price Index-numbers (weighted average cost of food, groceries, and house rent for the six capital cities), and the Wholesale Price Index number (Melbourne) are shown in each quarter, while unemployment percentages are shown quarterly since the end of the year 1912 only. The other index-numbers since 1913 refer to the average for the whole year, but for purposes of convenience are plotted on the graph as at the end, not the middle, of the year. Retail Price and Wholesale Price Index-numbers show the average level during the whole of each quarter, and they also for convenience are plotted at the end, and not the middle, of each quarter.

(v) *Male and Female Occupations.* Included in the changes in rates of wage recorded in the previous tables are those which in the whole or part thereof affected female occupations. Particulars in respect of these changes in so far as they relate to the numbers of male and female workers affected, etc., are set out hereunder :—

CHANGES IN RATES OF WAGE.—EFFECT IN MALE AND FEMALE OCCUPATIONS, 1923 TO 1927.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	All States. (*a*)	Australia.
					NUMBER OF MALE EMPLOYEES AFFECTED.					
1923	465,446	256,666	27,421	60,967	31,507	24,931	71	1,002	42,830	910,841
1924	181,779	295,591	38,271	95,743	37,185	24,100	35	30	76,994	749,728
1925	429,300	322,075	162,971	98,337	36,651	17,848	26	243	40,854	1,108,305
1926	478,633	369,093	26,430	91,190	33,401	23,539	53	63	57,767	1,080,169
1927	520,752	333,820	7,416	95,663	15,408	24,726	448	206	46,331	1,044,770
					NET AMOUNT OF INCREASE PER WEEK TO MALE EMPLOYEES.					
	£	£	£	£	£	£	£	£	£	£
1923	50,954	33,902	(*b*) 2,290	9,270	(*b*) 123	1,893	(*b*) 20	298	3,654	97,538
1924	6,947	2,600	11,869	7,010	1,457	1,086	15	1	356	31,341
1925	37,480	18,448	41,893	8,748	2,767	293	(*b*) 9	133	1,213	110,966
1926	40,658	24,641	4,781	4,019	3,562	673	20	11	1,411	79,776
1927	25,815	8,048	849	4,102	1,080	(*b*) 999	107	35	(*b*) 137	38,900
					AVERAGE INCREASE PER HEAD PER WEEK TO MALE EMPLOYEES.					
	s. *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*
1923	2 2	2 8	(*b*)1 8	3 1	(*b*)0 1	1 6	(*b*)5 8	5 11	1 9	2 2
1924	0 9	0 2	6 2	1 6	0 9	0 11	8 7	0 8	0 1	0 10
1925	1 9	1 2	5 2	1 10	1 6	0 4	(*b*)6 11	10 11	0 7	2 0
1926	1 8	1 4	3 7	0 11	2 2	0 7	7 7	3 6	0 6	1 6
1927	1 0	0 6	2 3	0 10	1 5	(*b*)0 10	4 10	3 5	(*b*)0 1	0 9
					NUMBER OF FEMALE EMPLOYEES AFFECTED.					
1923	53,994	19,428	2,630	2,242	550	987	..	..	180	80,011
1924	14,287	43,170	14,704	15,518	3,413	2,044	..	..	4,791	97,927
1925	84,823	21,048	21,624	15,384	3,501	718	6,806	..	..	153,904
1926	47,168	60,512	6,523	12,101	4,870	1,839	..	..	8,578	141,591
1927	121,595	69,334	1,836	14,109	3,270	2,633	..	55	6,390	219,222
					NET AMOUNT OF INCREASE PER WEEK TO FEMALE EMPLOYEES.					
	£	£	£	£	£	£	£	£	£	£
1923	2,914	3,032	113	514	54	(*b*) 138	..	..	(*b*) 9	6,480
1924	913	4,712	2,124	825	422	249	..	..	780	10,025
1925	3,300	1,520	2,082	945	432	..	182	..	..	8,461
1926	2,813	3,379	300	578	602	75	..	..	197	7,944
1927	12,796	893	221	156	108	(*b*) 27	..	6	(*b*) 55	14,898
					AVERAGE INCREASE PER HEAD PER WEEK TO FEMALE EMPLOYEES.					
	s. *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*
1923	1 1	3 2	0 10	4 7	2 0	(*b*) 0 3	..	..	(*b*)1 0	1 8
1924	1 3	2 2	2 11	1 1	2 6	2 5	..	..	3 3	2 1
1925	0 9	1 5	1 11	1 3	2 6	..	0 6	..	..	1 1
1926	0 1	1 1	0 11	0 11	2 6	0 10	..	..	0 6	1 1
1927	2 1	0 3	2 4	0 2	0 8	(*b*) 0 2	..	2 2	(*b*)0 2	1 3

(*a*) Changes recorded in this column are common to all States, as the particulars relating to the number of workpeople affected and the net amount of increase per week in each State were not ascertainable. (*b*) Decrease.

3. Methods by which Changes were Effected, and Results.—(i) *Summary, Australia, 1927.* The following table gives for Australia the number of workpeople affected, and the total net amount of increase in the weekly wage distribution brought about either without, or after, stoppage of work during the year 1927, as a result of the application of one or other of the methods set out in the tables :—

CHANGES IN RATES OF WAGE.—METHODS AND RESULTS, AUSTRALIA, 1927.

Methods by which Changes were Effected.	Without Stoppage of Work.		After Stoppage of Work.		All Changes.	
	No. of Work-people Affected.	Total Net Amount of Increase per Week.	No. of Work-people Affected.	Total Net Amount of Increase per Week.	No. of Work-people Affected.	Total Net Amount of Increase per Week.
		£		£		£
By direct negotiations	15,200	169	72	35	15,272	204
By negotiation, intervention or assistance of third party	12,256	1,467	..	..	12,256	1,467
By award of Court under Commonwealth Act	803,446	12,447	..	..	803,446	12,447
By agreement registered under Commonwealth Act	53,289	816	..	..	53,289	816
By award or determination under State Act	369,827	35,502	..	..	369,827	35,502
By agreement registered under State Act	9,902	2,562	..	..	9,902	2,562
TOTAL	1,263,920	52,963	72	35	1,263,992	52,998

(ii) *Summary, Australia, 1923 to 1927.* So far as possible, the effect of awards or agreements is recorded in the figures for the year in which such awards or agreements are made and filed. In certain cases, however, the awards or agreements are made retrospective as to the date on which the altered rate of wage has to be paid, and in others the particulars as to the number of workpeople affected and the effect of the change are not ascertainable in time for inclusion in the tabulations for the year in which the change occurred.

CHANGES IN RATES OF WAGE.—METHODS AND RESULTS, AUSTRALIA, 1923 TO 1927.

Particulars.	By Direct Negotiations.	By Negotiation, Intervention or Assistance of Third Party.	By Award of Court under C'wealth Act.	By Agreement Registered under C'wealth Act.	By Award or Determination under State Act.	By Agreement Registered under State Act.	By other Means.	TOTAL.
1923.								
Number of Workpeople affected	18,605	52,298	334,180	46,974	503,722	35,073	..	990,852
Amount of Increase per week £	2,488	1,124	46,438	6,633	42,614	4,721	..	104,018
1924.								
Number of Workpeople affected	1,939	65,653	521,469	34,401	205,615	18,578	..	847,655
Amount of Increase per week £	654	14,627	a 14,636	a 51	31,668	9,104	..	41,366
1925.								
Number of Workpeople affected	15,110	23,317	581,306	64,849	547,986	29,641	..	1,262,209
Amount of Increase per week £	1,880	1,959	29,996	4,524	80,322	746	..	119,427
1926.								
Number of Workpeople affected	44,289	40,136	893,344	69,555	140,468	16,000	17,968	1,221,760
Amount of Increase per week £	3,460	5,084	41,598	5,785	27,976	2,521	1,196	87,620
1927.								
Number of Workpeople affected	15,272	12,256	803,446	53,289	369,827	9,902	..	1,263,992
Amount of Increase per week £	204	1,467	12,447	816	35,502	2,562	..	52,998

(*a*) Decrease.

C.—EMPLOYMENT.

§ 1. Industrial Disputes.

1. **General.**—Information with regard to the collection of particulars and methods of tabulation of industrial disputes involving stoppage of work has appeared in previous issues of the Year Book, and is also given in the annual Reports of the Labour and Industrial Branch of this Bureau.

In *annual** tabulations, particulars are included of all disputes which either *commenced* or were *current* during the year under review. As regards "number of disputes," and "number of establishments involved," therefore, duplication will take place in respect of those disputes which started in and were unsettled at the end of a preceding year; the number involved will, however, be indicated in a footnote, to permit of due allowance being made therefor in any calculations made from the tables.

2. **Industrial Disputes Involving Stoppage of Work, Classified in Industrial Groups, 1927.**—The following tables give particulars of industrial disputes which either commenced or were current during the year 1927, classified according to industrial groups. Similar information for the years 1913 to 1926 was published in Labour Reports Nos. 5 to 17.

INDUSTRIAL DISPUTES CLASSIFIED ACCORDING TO INDUSTRIAL GROUPS, 1927.

Class.	Industrial Group.	No. of Disputes.	No. of Estab. Involved.	No. of Workpeople Involved.			No. of Working Days Lost.	Estimated Loss in Wages.
				Directly.	Indirectly.	Total.		
	NEW SOUTH WALES.							£
II.	Engineering, metal works, etc.	22	22	5,935	949	6,884	123,741	101,716
VI.	Other manufacturing ..	4	4	417	60	477	3,689	3,214
VII.	Building	8	62	696	2,670	3,366	113,907	98,759
VIII.	Mines, quarries, etc.	270	342	92,488	36,492	128,980	838,651	983,839
IX.	Railway and tramway services	3	3	1,005	65	1,070	4,528	3,713
X.	Other land transport ..	1	1	140	..	140	840	925
XI.	Shipping, wharf labour, etc. ..	9	14	5,376	55	5,431	33,606	26,098
XIV.	Miscellaneous	22	22	2,059	134	2,193	15,001	11,796
	Total	(*a*)339	470	108,116	40,425	148,541	1,133,963	1,230,060
	VICTORIA.							
II.	Engineering, metal works, etc.	6	12	611	170	781	11,718	10,535
III.	Food, drink, etc.	1	1	11	94	105	158	110
IV.	Clothing, hats, boots, etc. ..	4	4	893	..	893	2,190	920
VI.	Other manufacturing ..	1	1	17	..	17	17	17
VII.	Building	6	7	500	20	520	4,117	3,825
VIII.	Mines, quarries, etc.	3	3	2,071	..	2,071	5,952	5,440
XI.	Shipping, wharf labour, etc. ..	3	8	4,834	..	4,834	30,215	23,623
	Total	(*a*) 24	36	8,937	284	9,221	54,367	44,470

(*a*) One dispute in New South Wales (involving 1 establishment and 360 workers); two in Victoria (2 establishments and 16 workers); and one in Queensland (1 establishment and [illegible] workers) commenced in 1926.

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* In respect of years prior to 1922, the figures include complete particulars of industrial disputes which *commenced* during any calendar year; and where any such dispute extended into a subsequent year, the relative figures were also incorporated in those for the year in which the dispute commenced.

INDUSTRIAL DISPUTES CLASSIFIED ACCORDING TO INDUSTRIAL GROUPS, 1927—*continued.*

Class.	Industrial Group.	No. of Disputes.	No. of Estab. Involved.	No. of Workpeople Involved.			No. of Working Days Lost.	Estimated Loss in Wages.
				Directly.	Indirectly.	Total.		
								£
	QUEENSLAND.							
III.	Food, drink, etc.	6	6	648	541	1,189	16,683	13,612
VII.	Building	2	61	5,013	..	5,013	220,182	186,813
VIII.	Mines, quarries, etc.	4	6	502	5	507	7,589	9,022
IX.	Railway and tramway services	2	2	17,877	..	17,877	151,949	90,577
X.	Other land transport ..	1	1	89	25	114	228	200
XI.	Shipping, wharf labour, etc. ..	8	13	4,067	19	4,086	27,526	21,751
XII.	Pastoral, agricultural, etc. ..	3	283	1,218	50	1,268	2,476	2,686
XIV.	Miscellaneous	4	4	180	..	180	1,502	1,223
	Total	(*a*) 30	376	29,594	640	30,234	428,135	325,884
	SOUTH AUSTRALIA.							
II.	Engineering, metal works, etc.	3	3	155	4	159	885	710
VII.	Building	1	1	350	..	350	1,750	1,400
IX.	Railway and tramway services	4	4	2,187	1,285	3,472	19,697	15,117
X.	Other land transport ..	1	1	107	..	107	1,391	1,221
XI.	Shipping, wharf labour, etc. ..	6	11	3,395	33	3,428	22,790	17,686
XIV.	Miscellaneous	4	4	323	37	360	4,771	4,132
	Total	19	24	6,517	1,359	7,876	51,284	40,266
	WESTERN AUSTRALIA.							
I.	Wood, sawmill, timber, etc. ..	5	5	560	..	560	7,718	5,716
II.	Engineering, metal works, etc.	1	1	20	..	20	20	24
V.	Books, printing, binding, etc. ..	4	4	190	9	199	1,001	1,365
VI.	Other manufacturing ..	1	1	47	..	47	282	220
VII.	Building	1	1	23	38	61	793	858
VIII.	Mines, quarries, etc.	4	4	497	..	497	1,825	2,190
XI.	Shipping, wharf labour, etc. ..	2	7	1,894	..	1,894	11,748	9,259
XIV.	Miscellaneous	2	2	114	..	114	432	312
	Total	20	25	3,345	47	3,392	23,819	19,944
	TASMANIA.							
IV.	Clothing, hats, boots, etc. ..	1	1	30	..	30	120	49
VIII.	Mines, quarries, etc.	4	4	290	421	711	14,762	9,089
XI.	Shipping, wharf labour, etc. ..	1	1	34	..	34	68	44
	Total	6	6	354	421	775	14,950	9,182
	NORTHERN TERRITORY.							
II.	Engineering, metal works, etc.	1	1	7	..	7	210	210
XIV.	Miscellaneous	1	1	331	..	331	4,953	4,543
	Total	2	2	338	..	338	5,163	4,753
	FEDERAL CAPITAL TERRITORY.							
VII.	Building	1	5	380	..	380	1,900	2,137
	Total	1	5	380	..	380	1,900	2,137
	ALL STATES.							
I.	Wood, sawmill, timber, etc. ..	5	5	560	..	560	7,718	5,716
II.	Engineering, metal works, etc.	33	39	6,728	1,123	7,851	136,574	113,195
III.	Food, drink, etc., manufacturing and distribution	7	7	659	635	1,294	16,841	13,722
IV.	Clothing, hats, boots, etc. ..	5	5	923	..	923	2,310	969
V.	Books, printing, binding, etc. ..	4	4	190	9	199	1,001	1,365
VI.	Other manufacturing ..	6	6	481	60	541	3,988	3,451
VII.	Building	19	137	6,962	2,728	9,690	342,649	293,792
VIII.	Mines, quarries, etc.	285	359	95,848	36,918	132,766	868,779	1,009,580
IX.	Railway and tramway services	9	9	21,069	1,350	22,419	176,174	109,407
X.	Other land transport ..	3	3	336	25	361	2,459	2,346
XI.	Shipping, wharf labour, etc. ..	29	54	19,600	107	19,707	125,953	98,461
XII.	Pastoral, agricultural, etc. ..	3	283	1,218	50	1,268	2,476	2,686
XIV.	Miscellaneous	33	33	3,007	171	3,178	26,659	22,006
	Total Australia (*a*) ..	441	944	157,581	43,176	200,757	1,713,581	1,676,696

(*a*) See note (*a*) to table on page 563.

3. Industrial Disputes, Australia, 1923 to 1927.—The following table gives particulars of the number of industrial disputes, the number of workpeople involved, and the losses in working days and wages caused by disputes which either commenced or were current during each of the years 1923 to 1927, classified according to industrial groups :—

INDUSTRIAL DISPUTES.—AUSTRALIA, 1923 TO 1927.

Year.	Manufacturing. (Groups I. to VI.)	Building. (Group VII.)	Mining. (Group VIII.)	Transport, Land and Sea. (Groups IX. to XI.)	Miscellaneous. (Groups XII. to XIV.)	ALL GROUPS.
			NUMBER OF DISPUTES.			
1923 ..	44	8	171	28	23	274
1924 ..	31	15	410	23	25	504
1925 ..	39	15	391	30	24	499
1926 ..	60	17	227	29	27	360
1927 ..	60	19	285	41	36	(*a*) 441
1923 to 1927 ..	234	74	1,484	151	135	2,078
			NUMBER OF WORKPEOPLE INVOLVED.			
1923 ..	9,884	577	58,043	2,257	5,560	76,321
1924 ..	6,899	2,753	133,876	5,631	3,287	152,446
1925 ..	8,420	1,882	135,409	25,084	5,951	176,746
1926 ..	12,408	924	93,107	2,901	3,694	113,034
1927 ..	11,368	9,690	132,766	42,487	4,446	200,757
1923 to 1927 ..	48,979	15,826	553,201	78,360	22,938	719,304
			NUMBER OF WORKING DAYS LOST.			
1923 ..	153,053	6,886	907,767	32,609	45,662	1,145,977
1924 ..	116,427	28,204	662,257	85,479	26,279	918,646
1925 ..	129,808	37,615	577,132	291,415	92,600	1,128,570
1926 ..	271,049	10,015	950,770	36,693	41,734	1,310,261
1927 ..	168,432	342,649	868,779	304,586	29,135	1,713,581
1923 to 1927 ..	838,769	425,369	3,966,705	750,782	235,410	6,217,035
			ESTIMATED LOSS IN WAGES.			
	£	£	£	£	£	£
1923 ..	120,127	6,284	1,086,904	29,580	32,611	1,275,506
1924 ..	80,746	21,359	735,572	61,823	18,199	917,699
1925 ..	124,894	35,674	688,755	209,521	48,700	1,107,544
1926 ..	249,712	7,721	1,098,111	27,306	32,963	1,415,813
1927 ..	138,418	293,792	1,009,580	210,214	24,692	1,676,696
1923 to 1927 ..	713,897	364,830	4,618,922	538,444	157,165	6,393,258

(*a*) See note (*a*) to table on page 563.

4. Summary of Disputes (involving Stoppage of Work), 1923 to 1927.—The following table gives particulars of the number of industrial disputes in each State in various years from 1923 to 1927, together with the number of workpeople involved, the number of working days lost, and the total estimated loss in wages.

INDUSTRIAL DISPUTES.—SUMMARY, 1923 TO 1927.

State or Territory.	Year.	No. of Disputes.	Establishments Involved in Disputes.	No. of Workpeople Involved.			No. of Working Days Lost.	Total Estimated Loss in Wages.
				Directly.	In-directly.	Total.		£
New South Wales ..	1923	200	601	54,809	5,390	60,199	892,306	1,038,519
	1924	416	584	116,087	17,648	133,735	706,796	755,142
	1925	430	458	123,292	16,937	140,229	649,840	736,601
	1926	256	631	68,281	28,359	96,640	1,111,230	1,229,410
	1927	(a) 339	470	108,116	40,425	148,541	1,133,963	1,230,060
Victoria	1923	29	133	6,279	771	7,050	98,880	108,512
	1924	30	36	9,621	416	10,037	66,567	50,735
	1925	19	158	5,428	3,172	8,600	131,737	130,817
	1926	33	39	6,320	2,245	8,565	100,735	106,423
	1927	(a) 24	36	8,937	284	9,221	54,367	44,470
Queensland ..	1923	25	36	2,724	340	3,064	55,131	53,081
	1924	25	30	2,889	246	3,135	47,214	42,018
	1925	22	64	20,432	840	21,272	219,826	164,480
	1926	29	37	2,054	391	2,445	30,118	27,412
	1927	(a) 30	376	29,594	640	30,234	428,135	325,884
South Australia ..	1923	10	23	806	975	1,781	25,971	20,440
	1924	14	52	1,546	147	1,693	19,459	14,851
	1925	11	24	1,118	281	1,399	19,463	12,240
	1926	17	60	2,008	740	2,748	22,836	17,133
	1927	19	24	6,517	1,359	7,876	51,284	40,266
Western Australia ..	1923	6	88	1,255	2,752	4,007	72,274	58,408
	1924	13	233	2,131	1,366	3,497	66,734	42,329
	1925	10	180	3,321	814	4,135	98,941	56,358
	1926	9	28	523	78	601	9,081	5,998
	1927	20	25	3,345	47	3,392	23,819	19,944
Tasmania	1923	3	3	197	..	197	1,093	1,296
	1924	5	5	268	54	322	11,606	12,268
	1925	3	16	169	70	239	2,989	2,300
	1926	10	12	660	231	891	5,080	4,363
	1927	6	6	354	421	775	14,950	9,182
Fed. Cap. Territory	1923	1	1	23	..	23	322	250
	1925	3	5	823	33	856	5,735	4,709
	1926	4	4	829	110	939	30,185	24,204
	1927	2	2	338	..	338	5,163	4,753
Northern Territory	1923	..	..	..	..	..	..	..
	1924	1	1	27	..	27	270	356
	1925	1	1	16	..	16	39	39
	1926	2	2	93	112	205	996	870
	1927	1	5	380	..	380	1,900	2,137
Australia	1923	274	885	66,093	10,228	76,321	1,145,977	1,275,506
	1924	504	941	132,569	19,877	152,446	918,646	917,699
	1925	499	906	154,599	22,147	176,746	1,128,570	1,107,544
	1926	360	813	80,768	32,266	113,034	1,310,261	1,415,813
	1927	(a) 441	944	157,581	43,176	200,757	1,713,581	1,676,696

(a) See footnote (a), page 563.

Detailed information in regard to the disputes during these and previous years is given in the Labour Reports issued by this Bureau.

The figures given in the tables show that of the total number of disputes (441) which occurred in 1927 no less than 285 occurred in connexion with the mining industry, and of these 270 occurred in New South Wales. The total loss in wages through all disputes in Australia was £1,676,696. The loss through disputes in the coal-mining industry in New South Wales was £983,839, or 59 per cent. of the total loss in wages for Australia.

5. **Principal Disputes, 1927.**—Particulars relating to the principal disputes which occurred during 1927 are given hereunder :—

(i) *New South Wales.* The most extensive dispute was that which involved the Northern Collieries, the question at issue being the interpretation of General Rule 4 of the Coal Mines Regulation Act in regard to inspections by deputies. There were twenty mines involved, employing over 9,000 workers. The dispute lasted 24 days, and resulted in a loss of 216,528 working days and £264,735 in wages. The matter was settled at a conference at which the Minister for Mines was Chairman, by the issue of a special regulation under which the deputies could carry out their duties to the satisfaction of the men. Another dispute of importance arose in connexion with the Iron and Steel Works of the Broken Hill Pty. Ltd. at Newcastle. The trouble started in May, 1926, and was not regarded as closed until July, 1927. The men demanded a working week of 44 hours in place of 48, but ultimately declared the strike off, and accepted the general conditions specified by the Federal Court. The total loss amounted to 122,040 working days and £97,632 in wages. Further extensive trouble occurred in the Northern Collieries in February, and involved 49 mines and 13,551 workers. The dispute was the result of a decision of the Miners' Delegate Board not to work until aggregate meetings were held to discuss whether a general strike should take place. These meetings were held, but the recommendations of the leaders were rejected. Work was resumed on antecedent conditions after a duration of eight days, which involved a loss of 108,408 working days and £130,090 in wages. The coal trimmers at seven mines at Newcastle ceased work during May and June over the questions of : (*a*) extra payment for working on a steamer carrying inflammable cargo ; (*b*) preferential work for men engaged in dispute ; and (*c*) "waste meals." After a stoppage of thirteen days, work was resumed on the advice of the chairman of a compulsory conference under the Commonwealth Industrial Peace Act. The result was in favour of the men, who lost 100,572 working days and £119,466 in wages. Altogether 11,805 men were involved. An extensive dispute occurred in March at the Power House, Cockle Creek, in which members of the Engine-drivers and Firemen's Association were involved concerning employment at the new power house. The men finally agreed to the company having perfect freedom in selecting men irrespective of the union to which they belonged. The dispute lasted seventeen days, and represented a loss of 77,290 working days and £68,748 in wages.

During August a dispute lasting twenty days developed at the Hoskins Iron and Steel Co., Lithgow, and involved 1,600 men. A demand for higher wages was the cause of the trouble, which was settled by the promise of a conference of the parties after resumption of work. The losses incurred were 32,000 working days and £26,500 in wages. Other serious disputes in the mining industry occurred at the following collieries :—Excelsior Colliery, Thirroul, lasting 155 days, and resulting in a loss of 31,620 working days and £37,944 in wages, due to objection by the workers to an official testing a place for deficiency. This dispute ended in favour of the men. At Richmond Main Colliery a dispute arose over various grievances followed by inter-union troubles. The dispute lasted 29 days, and resulted in a loss of 31,610 working days and £37,932 in wages ; the men returning to work on the conditions prevailing before the stoppage. Employees at the Redhead Colliery ceased work over the question of wet places and measurement of under-height, losing 24,376 working days and £29,251 in wages. Wallarah Colliery was idle for six weeks owing to a dispute concerning working four men in a bord and overtime rates. Work was resumed on antecedent conditions, the men losing 12,960 working days and £15,552 in wages. The Killingworth Colliery at West Wallsend stopped for 30 days as a result of alleged bad ventilation and presence of gas in mine, but the decision was unfavourable to the men, who lost 12,090 working days and £14,508 in wages. The only other mining dispute of note was that which occurred at the Invincible Colliery, Cullen Bullen, owing to refusal of the employees to cavil Nos. 1 and 2 tunnels together, and their demand for higher rates for No. 2 tunnel. The dispute lasted 46 days, and ended in favour of the men, who lost 10,026 working days and £12,032 in wages.

The waterside workers were concerned in a dispute which affected all States except Tasmania. Although the trouble started as a result of the refusal of the Commonwealth Arbitration Court to hear a plaint owing to repeated breaches of the existing award by the members of the Federation, it developed finally into a demand for a single daily "pick-up" of men for work on the wharves instead of the double "pick-up" provided by the award. The early stages of the trouble took the form of an overtime strike against all vessels in Australian ports, and started on 21st November, 1927. The shipowners demanded the complete observance of awards and threatened that if workers would not engage on that basis all ships in Australian waters would be tied up. As the federation persisted in its attitude, the owners carried out their threat, and vessels to the number of 150 were accordingly tied up on the night of 1st December, 1927. Unemployment on a very large scale was threatened. The action of the waterside workers was not, however, approved by organized labour, and the emergency Committee of the Australian Council of Trade Unions took steps on the 5th December to move the Commonwealth Arbitration Court to intervene in the dispute, with the result that, in view of the gravity of the situation, Judge Beeby of that jurisdiction heard the matter on 7th December, and, after receiving suitable guarantees from the representatives of the men that the award would be observed pending the hearing of the plaint, the Judge issued an interim award covering the question of the "pick-up," whereby the practice obtaining at the several ports on 10th January, 1927 (the day on which the Court commenced the hearing of the union's claims), was confirmed. The strike was declared off immediately and work resumed at all ports on the 8th December. The estimated loss by the waterside workers for the seven days during which the dispute lasted (i.e., while the ships were tied up) was 115,000 working days and £90,000 in wages.

(ii) *Victoria.* With the exception of the waterside workers' dispute, referred to in the preceding paragraph, the disputes in this State during 1927 were not of an extensive nature. During July and August engineers and others employed at the Sunshine Harvester Co. were out for 35 days through a demand for a 44-hour week instead of a week of 48 hours. Work was resumed on condition that the case be reheard by the Commonwealth Arbitration Court, which decided against the workers. The losses incurred by the employees involved in the dispute were 3,675 working days and £4,500 in wages. The next dispute in point of magnitude was that in which iron pipe moulders were involved, seven firms being affected. The trouble arose from a demand by the employers for the same output for a week of 44 hours as for one of 48 hours, the matter being settled by compromise. The dispute lasted 22 days and involved a loss to the employees of 5,500 working days and £4,160 in wages. A dispute which occurred at the State Electricity Commission's Coal Mine at Yallourn, which threatened to be of an extensive nature, ended in five days, with the loss of 3,750 working days and £2,800 in wages to the 750 men concerned. The trouble arose from a demand by the men for the removal to another position of a foreman, which demand was partly conceded by the management. The men at the State Coal Mine, Wonthaggi, were involved in a dispute which lasted for three days, owing to action taken by the management concerning the neglect of two men to return their time tokens at the completion of their shift. The men accepted the direction of the management, after a stoppage causing a loss of 1,992 working days and £2,390 in wages. The State Electricity Commission was involved in another dispute at Rubicon, through reduction of award rates and non-payment of country allowance. The Commission conceded the claim, but the men lost 2,160 working days and £2,000 in wages during the eighteen days for which the dispute continued.

(iii) *Queensland.* The demand for a working week of 40 hours to be worked in five days was the cause of an extensive dispute in the building trades of Queensland. Sixty firms were directly involved, and approximately 5,000 men. The dispute, which commenced in January, lasted 44 days, and resulted in a loss to employees of 220,000 working days and £186,525 in wages. Work was resumed on antecedent conditions, the men declaring the strike off after an abortive conference. This dispute may be considered one of the most extensive occurring in Australia during the year. The Queensland Railways were concerned in a dispute during September, which involved 17,866 employees of that Department, and lasted for eight and a half days. The trouble was the outcome of a dispute which occurred at the South Johnstone Sugar Mill concerning employment. Certain railway employees were dismissed for refusing to handle sugar declared "black" in connexion with the last mentioned strike, and the railway men stopped work as the result of the refusal by the Railways Commissioner to reinstate the men involved. Work was resumed on the basis of "no victimization" nor loss of status by the employees who, however, suffered a loss of 151,861 working days and £90,501 in wages. The only dispute of note in the mining industry was at the Redbank Colliery, Ipswich. This dispute involved only 69 men, but lasted 135 days, and resulted in a loss of 9,315 working days and £11,178 in wages. The trouble arose: (*a*) on account of the refusal by the management of a demand by the men that miners who had been "cavilled" out should be reinstated; and (*b*) concerning a miner declared by the manager to be incompetent. Work was resumed on antecedent conditions. The dispute at the Sugar Mill, South Johnstone, referred to previously, although of itself not extensive, nevertheless had unfortunate after-effects. The men struck work for preference of employment in the 1927–28 season to those employees who had finished the 1926–27 season, but the demand was not conceded. Work was carried on during the dispute by non-unionists, assisted by the farmers, and conflicts between the pickets and non-unionists occurred. Special precautions had to be taken to protect the men who engaged for employment during the trouble. On account of the serious state of affairs the Government issued a proclamation commandeering all arms and ammunition in the affected area. The matter of the dispute was referred to the judicial jurisdiction of the Board of Trade and Arbitration.

The dispute involved 490 men directly and indirectly connected with the sugar industry, and resulted in a loss of 9,310 working days and £6,827 in wages.

(iv) *South Australia.* The most extensive dispute for the year in this State was that in connexion with the waterside workers, which has been previously mentioned. The employees at the Railway Workshops, Islington, stopped work for fifteen days through the refusal of the management to allow a shop steward to accompany men called up before the manager. The men ultimately resumed work without gaining their point after a loss of 15,828 working days and £11,870 in wages. Other disputes worthy of mention were those in connexion with Commonwealth railway construction work at Oodnadatta (demand for dismissal), which was settled by compromise; and a further trouble at the Islington Railway Workshops (demand for withdrawal of detectives as watchmen), which ended practically in favour of the employees, as the management promised that the workshops would not be patrolled during working hours.

(v) *Western Australia.* There were two disputes only of any magnitude in this State, viz., the waterside workers, referred to previously, and one in connexion with the State Saw-mill, Pemberton, over the dismissal of two employees. The men dismissed were not reinstated, but the dispute lasted sixteen days, causing a loss of 3,504 working days and £2,528 in wages.

(vi) *Tasmania.* Only six disputes occurred in this State during the year. The dispute at the works of the Mount Lyell Mining and Railway Company, Queenstown, represented 85 per cent. of the total loss involved. The cause of the trouble was the demand for a 44-hour week instead of one of 48 hours. The men were out for 25 days, but failed to gain the concession, after losing 13,050 working days and £7,800 in wages.

(vii) *Northern Territory.* The men employed on railway construction, Katherine, ceased work owing to the refusal of the engineer to reinstate a dismissed employee. The trouble was settled after 32 days by employing the man in another gang. The loss amounted to 4,952 working days and £4,543 in wages.

(viii) *Federal Capital Territory.* Only one dispute occurred in the Territory during the year, five building firms being concerned therein. The men demanded an agreement for wet and holiday pay, but resumed after a compromise by which some of the men received slight increases, the claim for wet and holiday pay being waived. The losses incurred by the employees were 1,900 working days and £2,137 in wages.

It is, of course, obvious that the mere number of disputes cannot by itself be accepted as a proper basis of comparison, nor does the number of workpeople afford a satisfactory basis. A better idea as to the significance and effect of industrial disputes may be obtained from the number of working days lost and the estimated loss in wages.

The position which New South Wales occupies in comparison with the other States is almost entirely due to the prevalence of disputes in connexion with coal-mining, and attention has frequently been drawn to the preponderating influence exercised by these disputes on the total number of industrial disputes. In making any comparison as to the number of disputes in this industrial class in each State, it should be observed that the number of workers engaged in the coal mining industry is very much larger in New South Wales than in any of the other States.

Apart from these stoppages, the number of disputes in all other industries, whilst still in excess of that for each of the other States, does not compare unfavourably if the number of workpeople in each State is taken into consideration.

In regard to extensive dislocations of industry prior to the institution of systematic inquiries by this Bureau, efforts were made to obtain statistical data relating to the shearers' disputes in 1890, 1891, and 1894, and the maritime dispute in the early part of 1891, but precise information was not obtainable.

6. **Duration of Industrial Disputes, 1927.**—The following table gives particulars respecting the number of disputes, workpeople directly and indirectly involved, working days lost, and estimated amount of loss in wages respectively, consequent on the cessations of work recorded for Australia during the year 1927, classified under the adopted limits of duration :—

INDUSTRIAL DISPUTES.—DURATION, AUSTRALIA, 1927.(*a*)

Limits of Duration.	No. of Disputes.	No. of Workpeople Involved.			Number of Working Days Lost.	Total Estimated Loss in Wages.
		Directly.	Indirectly.	Total.		£
1 day and less	162	48,827	5,826	54,653	54,613	64,895
2 days and more than 1 day	54	14,820	1,060	15,880	30,153	33,859
3 days and more than 2 days	42	12,718	2,236	14,954	41,903	44,822
Over 3 days and less than 1 week (6 days)	41	10,370	1,175	11,545	52,708	57,751
1 week and less than 2 weeks	60	54,722	3,676	58,398	444,500	380,956
2 weeks and less than 4 weeks	49	6,162	17,209	23,371	305,469	304,653
4 weeks and less than 8 weeks	25	9,018	11,870	20,888	658,908	664,597
8 weeks and over ..	8	944	124	1,068	125,327	125,163
Total	*a*441	157,581	43,176	200,757	1,713,581	1,676,696

(*a*) See footnote (*a*) on page 563.

Similar figures for the years 1913 to 1926 will be found in previous issues of the Year Book and in the Labour Reports of this Bureau.

7. Causes of Industrial Disputes, 1914 to 1927.—The following table shows the number of disputes, number of workpeople involved, and the total number of working days lost in disputes during the years 1914 and 1922 to 1927, classified according to principal cause :—

INDUSTRIAL DISPUTES.—CAUSES, AUSTRALIA, 1914 TO 1927.

Causes of Dispute.	1914.	1922.	1923.	1924.	1925.	1926.	1927.
			NUMBER OF DISPUTES.				
1. Wages—							
(*a*) For increase ..	50	15	35	44	33	23	24
(*b*) Against decrease ..	3	18	4	7	5	5	4
(*c*) Other wage questions	67	83	37	95	99	67	66
2. Hours of Labour—							
(*a*) For reduction ..	1	12	10	2	4	13	14
(*b*) Other disputes re hours	13	2	2	4	6	2	4
3. Trades Unionism—							
(*a*) Against employment of non-unionists ..	13	6	4	6	8	5	12
(*b*) Other union questions	11	15	11	31	27	22	24
4. Employment of particular Classes or Persons ..	83	155	68	137	118	108	152
5. Working Conditions ..	72	89	57	111	106	46	72
6. Sympathetic	3	8	9	8	16	8	5
7. Other Causes	21	42	37	59	77	61	64
Total	337	445	274	504	499	360	(*a*) 441
			NUMBER OF WORKPEOPLE INVOLVED.				
1. Wages—							
(*a*) For increase ..	7,362	843	9,816	8,312	23,443	17,046	7,316
(*b*) Against decrease ..	534	4,432	174	1,113	1,123	1,275	300
(*c*) Other wage questions	15,243	24,459	8,696	30,585	31,387	18,883	20,297
2. Hours of Labour—							
(*a*) For reduction ..	220	5,935	6,488	1,328	462	9,730	7,813
(*b*) Other disputes re hours	3,237	124	485	1,172	2,668	290	288
3. Trades Unionism—							
(*a*) Against employment of non-unionists ..	5,807	1,072	473	1,005	1,592	125	4,432
(*b*) Other union questions	1,593	4,264	2,310	12,078	10,957	3,790	25,848
4. Employment of particular Classes or Persons ..	14,863	36,194	11,269	39,839	36,075	25,165	55,174
5. Working Conditions ..	17,053	27,334	15,605	36,630	35,034	12,889	29,766
6. Sympathetic	675	1,119	875	436	5,328	3,499	1,484
7. Other Causes	4,462	10,556	20,130	19,948	28,677	20,342	48,039
Total	71,049	116,332	76,321	152,446	176,746	113,034	200,757
			NUMBER OF WORKING DAYS LOST.				
1. Wages—							
(*a*) For increase ..	99,451	8,694	64,493	120,317	209,356	580,183	150,691
(*b*) Against decrease ..	32,965	154,791	1,012	13,553	24,352	2,573	2,578
(*c*) Other wage questions	169,847	149,129	81,749	111,613	154,169	82,898	83,831
2. Hours of Labour—							
(*a*) For reduction ..	9,240	164,794	101,807	130,410	12,816	280,152	305,782
(*b*) Other disputes re hours	16,855	1,701	36,092	42,441	16,178	290	4,487
3. Trades Unionism—							
(*a*) Against employment of non-unionists ..	92,720	5,485	784	2,555	14,784	1,623	82,156
(*b*) Other union questions	6,968	18,976	17,743	40,046	105,195	15,607	204,802
4. Employment of particular Classes or Persons ..	64,367	198,256	63,094	253,779	214,738	114,917	310,425
5. Working Conditions ..	584,289	123,665	134,830	124,041	150,325	123,390	303,788
6. Sympathetic	2,125	9,438	6,357	926	41,046	38,381	3,573
7. Other Causes	11,568	23,756	638,016	78,935	185,616	70,247	261,468
Total	1,090,395	858,685	1,145,977	918,616	1,128,570	1,310,261	1,713,581

(*a*) See footnote (*a*), page 563.

The main causes of industrial disputes are "Wage" questions, "Working Conditions," and "Employment of Particular Classes or Persons." In each of the years 1914 to 1925, with the exception of 1922, the number of dislocations concerning wages exceeded those caused by any other question, and varied between a minimum proportion of 26 per cent. in 1922 and a maximum of 45 per cent. in 1916. During 1927 the number of disputes concerning "Wages" represented 21 per cent. of the total number for the year. The majority of the dislocations of work classified under the heading, "Employment of Particular Classes or Persons," are stoppages for the purpose of protesting against the dismissal of certain employees, who, in the opinion of their fellow-workers, have been unfairly treated or victimized. This class of dispute occurs very frequently in the coal-mining industry. The number of disputes over "Trade Union" questions has represented a fairly uniform proportion of the total number of disputes during the years under review, while stoppages of work concerning "Hours of Labour" have increased during the last two years. "Sympthetic" disputes were not numerous during 1926 and 1927.

8. **Results of Industrial Disputes.**—The following table shows the number of disputes, number of workpeople involved, and the number of working days lost in disputes throughout Australia during the five years 1923 to 1927, classified according to results :—

INDUSTRIAL DISPUTES CLASSIFIED ACCORDING TO RESULTS.—AUSTRALIA, 1923 TO 1927.(*a*)

Year.	No. of Disputes.				Number of Workpeople Involved in Disputes.				Total Number of Working Days Lost by Disputes.			
	In Favour of Workpeople.	In Favour of Employer.	Compromise.	Indefinite.	In Favour of Workpeople.	In Favour of Employer.	Compromise.	Indefinite.	In Favour of Workpeople.	In Favour of Employer.	Compromise.	Indefinite.
1923 ..	77	156	24	8	12,951	54,926	5,787	1,784	65,625	917,162	132,135	2,392
1924 ..	146	261	48	45	32,762	89,709	13,843	15,432	153,533	416,174	291,039	29,445
1925 ..	130	335	20	6	50,983	116,658	4,844	2,829	448,136	549,796	52,321	12,923
1926 ..	72	243	30	11	11,631	85,115	14,220	1,623	73,313	891,093	257,004	21,486
1927 *a b*	88	307	35	5	28,005	152,429	18,571	995	207,009	1,198,162	294,102	10,285

(*a*) See footnote (*a*), page 563.

(*b*) The following particulars of disputes which were incomplete at the 31st December, 1927, should be added to the above figures to effect a balance with those published in the preceding table :—

State.	No. of Disputes.	No. of Establishments.	Workpeople Involved.	Working Days Lost.	Wages Lost.
					£
New South Wales	4	4	576	2,970	3,380
Queensland	1	1	21	252	250
Western Australia	1	1	160	800	960
Total	6	6	757	4,022	4,590

9. **Methods of Settlement.**—The following tables show for Australia the number of disputes, number of workpeople involved, and number of working days lost in industrial disputes during the years 1914 and 1922 to 1927, classified according to the adopted schedule of methods of settlement :—

INDUSTRIAL DISPUTES.—METHODS OF SETTLEMENT, AUSTRALIA, 1914 TO 1927.(a)

Methods of Settlement.	1914.	1922.	1923.	1924.	1925.	1926.	1927.
NUMBER OF DISPUTES.							
Negotiations—							
Direct between employers and employees or their representatives	247	249	140	264	209	166	229
By intervention or assistance of distinctive third party—not under Commonwealth or State Industrial Act	11	52	25	20	24	16	18
Under State Industrial Acts—							
By intervention, assistance, or compulsory conference ..	7	7	4	11	12	8	13
By reference to Board or Court ..	17	7	2	7	2	10	19
Under Commonwealth Conciliation and Arbitration Act—							
By intervention, assistance, or compulsory conference ..	5	5	2	12	13	13	19
By Filling Places of Workpeople on Strike or Locked Out ..	16	11	5	5	4	8	5
By Closing-down Establishment Permanently	4	6	1	2	1	..	10
By Other Methods	30	96	86	179	226	135	122
Total	337	433	265	500	491	356	(b)435
NUMBER OF WORKPEOPLE INVOLVED.							
Negotiations—							
Direct between employers and employees or their representatives	48,204	62,000	30,213	70,895	75,961	44,995	94,070
By intervention or assistance of distinctive third party—not under Commonwealth or State Industrial Act	8,054	15,554	10,277	4,448	12,767	17,072	5,839
Under State Industrial Acts—							
By intervention, assistance, or compulsory conference ..	770	1,222	615	2,519	1,781	936	3,763
By reference to Board or Court ..	7,308	1,128	544	2,952	208	684	4,314
Under Commonwealth Conciliation and Arbitration Act—							
By intervention, assistance, or compulsory conference ..	205	446	58	4,262	3,251	4,332	33,517
By Filling Places of Workpeople on Strike or Locked Out ..	629	790	315	130	160	245	533
By Closing-down Establishment Permanently	86	171	18	170	28	..	1,104
By Other Methods	5,793	30,971	33,408	66,370	81,158	44,325	56,860
Total	71,049	112,282	75,448	151,746	175,314	112,589	200,000
NUMBER OF WORKING DAYS LOST.							
Negotiations—							
Direct between employers and employees or their representatives	803,799	353,336	229,503	373,155	470,110	417,158	700,968
By intervention or assistance of distinctive third party—not under Commonwealth or State Industrial Act	128,231	187,164	582,929	103,005	320,046	549,427	100,148
Under State Industrial Acts—							
By intervention, assistance, or compulsory conference ..	4,256	16,016	25,531	41,900	17,650	11,281	80,815
By reference to Board or Court ..	120,685	13,767	8,484	142,939	4,338	8,744	60,236
Under Commonwealth Conciliation and Arbitration Act—							
By intervention, assistance, or compulsory conference ..	1,421	8,081	473	74,376	67,272	134,841	305,303
By Filling Places of Workpeople on Strike or Locked Out ..	4,402	11,759	2,517	3,040	1,168	2,865	9,706
By Closing-down Establishment Permanently	3,646	603	18	1,250	1,932	..	30,289
By Other Methods	23,955	101,348	267,859	150,526	180,665	118,580	422,094
Total	1,090,395	692,074	1,117,314	890,191	1,063,176	1,242,896	1,709,559

(a) See footnote on page 563. (b) See footnote (b) on previous page;

INDUSTRIAL DISPUTES.—METHODS OF SETTLEMENT, AUSTRALIA, 1914 TO 1927 *(a)*—*continued.*

ESTIMATED LOSS IN WAGES.

Methods of Settlement.	1914.	1922.	1923.	1924.	1925.	1926.	1927.
	£	£	£	£	£	£	£
Negotiations—							
Direct between employers and employees or their representatives	402,729	283,515	252,059	398,628	505,565	425,527	700,332
By intervention or assistance of distinctive third party — not under Commonwealth or State Industrial Act	66,225	200,835	676,288	114,890	230,771	658,498	102,699
Under State Industrial Act—							
By intervention, assistance, or compulsory conference ..	1,841	14,663	24.158	34,151	15,395	6,819	77,162
By reference to Board or Court ..	64,208	10,541	7,536	110,559	3,499	7,771	42,978
Under Commonwealth Conciliation and Arbitration Act—							
By intervention, assistance, or compulsory conference ..	712	5,701	350	56,766	68,880	124.511	284,282
By Filling Places of Workpeople on Strike or Locked Out ..	2,076	8,670	1,737	2,111	1,225	2,548	7,245
By Closing-down Establishment Permanently	1,651	635	13	970	2,318	..	34,580
By Other Methods	11,786	92,308	279,104	167,149	206,775	134,805	422,828
Total	551,228	616,868	1,241,245	885,164	1,034,428	1,360,479	1,672,106

(a) See footnotes on previous page.

The majority of the disputes were settled by direct negotiations between employers and employees, the proportion so settled ranging between 47 per cent. in 1924 and 76 per cent. in 1921. Of the 435 disputes during 1927, 229 or 53 per cent were settled by this method. The proportion of dislocations settled by compulsory conferences or the intervention and assistance of officials under State or Commonwealth Arbitration Acts has varied considerably during the period under review, ranging from 2 per cent. in 1923 to 15 per cent. in 1920. The proportion in 1927 was 12 per cent. In connexion with the comparatively large number of disputes which are classified as having been settled "By other methods," many stoppages of work occur each year, principally at collieries, but the cause for such stoppages is not officially known to the employers or their representatives. Such stoppages usually last for one day, and work is resumed without negotiations for a settlement of the trouble.

§ 2. Fluctuations in Employment.

1. General.—The particulars given in the following tables are based upon information furnished by the secretaries of trade unions. The membership of the unions regularly reporting exceeds 400,000. Unemployment returns are not collected from unions the members of which are in permanent employment, such as railway and tramway employees, and public servants, or from unions whose members are casually employed (wharf labourers, etc.). Very few of the unions pay unemployment benefit, but the majority of the larger organizations have permanent secretaries and organizers who are closely in touch with the members and with the state of trade within their particular industries. In many cases unemployment registers are kept, and provision is made in the rules for payment of reduced subscriptions by members out of work. In view of these facts, and of the large membership of the unions from which quarterly returns are received,

percentage unemployment results based on the information supplied may be taken to show the general trend of unemployment. Seasonal fluctuations in unemployment have been provided for by collecting returns quarterly since the 1st January, 1913, the yearly figures quoted representing the average of the four quarters.

2. **Unemployment.**—(i) *States.* In addition to the qualifications referred to above, allowance must be made for the circumstance that the industries included in the returns from trade unions are not quite identical in the various States. The results, may, however, be taken as representing fairly well labour conditions generally.

UNEMPLOYMENT.—STATES, 1927.

State.	Unions Reporting.		Unemployed.	
	Number.	Members.	Number.	Percentage.
New South Wales	103	190,195	13,356	7.0
Victoria	83	127,403	9,387	7.4
Queensland	43	48,491	2,877	5.9
South Australia	59	45,678	3,320	7.2
Western Australia	56	27,516	1,491	5.4
Tasmania	31	6,702	601	11.1
Australia	375	445,985	31,032	7.0

(ii) *Summary for Australia.* The following table gives a summary for Australia for the last five years :—

UNEMPLOYMENT.—AUSTRALIA, 1923 TO 1927.

Particulars.	Unions.	Membership.	Unemployed.	
			Number.	Percentage.
1923	436	376,557	26,672	7.1
1924	413	397,613	35,507	8.9
1925	380	391,380	34,620	8.8
1926	374	415,397	29,326	7.1
1927	375	445,985	31,032	7.0
1927 1st Quarter	373	445,739	26,280	5.9
2nd "	387	455,133	29,217	6.4
3rd "	374	447,935	29,991	6.7
4th "	367	435,133	38,641	8.9

NOTE.—Similar figures for each of the four quarters of the years since 1912 will be found in the Labour Reports. The quarterly figures show the number of persons who were out of work for three days or more during a specified week in each quarter, and the annual figures, the average of the four quarters: they do not include persons out of work through strikes or lock-outs.

The highest percentage of unemployed yet recorded (12.5) was reached in the second quarter of 1921.

(iii) *Industrial Groups.* The next table shows the percentages unemployed in industrial groups. Industries in which employment is either unusually stable or exceptionally casual, such as railways, shipping, agricultural, pastoral, etc., and domestic, hotels, etc., are insufficiently represented in the returns owing to the impossibility of securing the necessary information from the trade unions. Particulars are not, therefore, shown separately for these groups, such returns as are available being included in the last group, " Other and Miscellaneous."

UNEMPLOYMENT IN INDUSTRIAL GROUPS.—AUSTRALIA, 1927.

Industrial Group.	Number Reporting.		Unemployed.	
	Unions.	Members.	Number.	Percentage.
I. Wood, Furniture, etc. ..	18	31,471	1,337	4.4
II. Engineering, Metal Works, etc.	59	76,248	4,331	5.7
III. Food, Drink, Tobacco, etc. ..	47	31,973	2,746	8.6
IV. Clothing, Hats, Boots, etc. ..	21	40,619	1,715	4.3
V. Books, Printing, etc.	12	18,589	335	1.8
VI. Other Manufacturing	64	39,662	4,567	11.3
VII. Building	41	49,708	3,730	7.4
VIII. Mining, Quarrying, etc. ..	21	33,179	4,034	12.1
X. Land Transport other than Railway and Tramway Services ..	9	15,677	787	5.0
IX., XI., XII., XIII., and XIV., Other and Miscellaneous ..	83	108,859	7,450	6.8
All Groups	375	445,985	31,032	7.0

§ 3. Apprenticeship.

In Year Book No. 16, pp. 602–3, information was given with regard to legislation relating to the question of apprenticeship. Tables were included showing the periods of apprenticeship fixed in the awards of the various industrial tribunals of the States and Commonwealth, also the proportion of apprentices to journeymen and journeywomen. This information has been omitted from the present issue, but further investigations are being made, and additional and more comprehensive information will be incorporated in a later issue.

D. ASSOCIATIONS.

§ 1. Labour Organizations.

1. **Registration.**—(i) *Under Trade Union Acts.* The benefits obtained by registering trade unions under the Trade Union Acts in force in the various States are not considered of much value; consequently the statistics of registered trade unions of employees do not accurately represent the position of unionism. Further, the returns for past years are so defective as to be practically valueless, inasmuch as no reliable indication is afforded of the numerical and financial position of the unions. Some of the registered unions fail to supply returns; this non-supply may lead to cancellation of the registration. Others have obtained the cancellation of their certificates of registration, the apparent reason being that they proposed to register under the Commonwealth Conciliation and Arbitration Act or a State Arbitration Act. In Queensland, some of the largest labour unions withdrew from registration during 1911, mainly on account of the necessity for closer restriction of their objects as set forth in their rules, consequent on legal decisions affecting trade unions. In Victoria and in South Australia very few of the existing unions are registered under the Trade Union Acts. It will be seen, therefore, that the available information under this heading is too meagre for statistical purposes.

(ii) *Under Industrial Arbitration Acts.* Information with regard to registrations of trade unions under the various State Industrial Arbitration Acts will be found in previous issues of the Year Book. The latest information available as to registrations is as follows:—New South Wales, 150 industrial unions of employers and 152 industrial unions of employees, the membership of the latter being 325,505; Queensland, 5 industrial unions of employers with 8,665 members and 86 industrial unions of employees with approximately 154,606 members; South Australia, 20 organizations of employees with 32,073 members; Western Australia, 37 organizations of employers with 1,069 members, and 127 organizations of employees with 45,593 members. Registration under Commonwealth legislation began in 1906. In that and the four following years, there was but one union of employers; another was registered in 1911. The unions of employees registered were 20 in 1906, with 41,413 members. In May, 1928, there were on the register 27 organizations of employers with 16,312 persons, firms or corporations affiliated; and 137 organizations of employees with 770,000 members.

2. **Particulars regarding Trade Unions.**—(i) *Types.* The trade unions in Australia are very diverse in character, and range from the small independent association to the large interstate organization, which, in its turn, may be merely a branch of a British or International union. Broadly speaking, there are four distinct classes of labour organizations, viz.:—(i) the local independent, (ii) the State, (iii) the interstate, and (iv) the Australasian or International, but a number of variations occur from each of these classes. The leading characteristics of each of these types were briefly outlined in Labour Report No. 2 (pp. 7 to 9) issued by this Bureau.

(ii) *Number and Membership.* As already stated, the figures for trade unions registered under the Acts do not represent the position of unionism in Australia. In 1912, the Labour and Industrial Branch of the Commonwealth Bureau of Census and Statistics was established, and with the cordial co-operation of the officials of the labour organizations, comprehensive figures relating to the development of organized labour are now available. The following table shows the position at the end of 1927:—

TRADE UNIONS, BRANCHES, AND MEMBERS, 1927.

State or Territory.	Number of Separate Unions.	Number of Branches.	Number of Members.
New South Wales	186	593	355,127
Victoria	149	408	247,618
Queensland	104	307	150,651
South Australia	106	104	79,771
Western Australia	130	168	60,586
Tasmania	81	61	16,734
Northern Territory	3	..	1,165
Total	759	1,641	911,652
Australia (*a*)	369 (*a*)	2,031 (*b*)	911,652

(*a*) Allowing for interstate duplication. The figures represent the number of distinct organizations and interstate groups of organizations in Australia—not the total number of organizations, which are practically independent and self-governing. (*b*) See remarks below.

In the preceding table the number of separate unions in each State refers to the number of unions which are represented in each State, exclusive of branches therein, and each union is counted once only. Except in the last line, the number of branches indicates the number of branches of State head offices, which may, of course, themselves be branches of an interstate or larger organization. In taking the total number of separate unions in Australia (see last line but one), it is obvious that, in the case of interstate and similar unions, there will be duplication, since each such union is counted once in each State in which it has any branches. In the figures given in the last line allowance has been made for this duplication. State branches of interstate or federated unions, as well as sub-branches within a State, are included under the heading "Branches" in the third column—last line. The scheme of organization of these interstate or federated unions varies greatly in character, and the number of separate Commonwealth unions does not, therefore, fairly represent the number of practically independent organizations in Australia. In some of these unions the State organizations are bound together under a system of unification and centralized control, while in others the State units are practically independent and self-governing, the federal bond being loose and existing only for one or two specified purposes. There are therefore 369 distinct organizations and interstate groups of organizations in Australia, having 2,031 State branches and sub-branches, and a total of 911,652 members.

(iii) *Classification in Industrial Groups.* The following table shows the number of unions and members thereof in Australia at the end of each of the last five years. The number of unions specified refers to the number of different unions represented in each State; and, while interstate or federated unions are counted once in each State in which they are represented, sub-branches within a State are not counted.

TRADE UNIONS.—INDUSTRIAL GROUPS, AUSTRALIA, 1923 TO 1927.

Industrial Groups.	1923.	1924.	1925.	1926.	1927.
NUMBER OF UNIONS.					
			(a)	(a)	(a)
I. Wood, Furniture, etc	18	18	18 (4)	18 (4)	18 (4)
II. Engineering, Metal Works, etc. ..	70	69	68 (21)	68 (22)	61 (23)
III. Food, Drink, Tobacco, etc. ..	64	65	65 (39)	65 (35)	63 (32)
IV. Clothing, Hats, Boots, etc ..	24	24	22 (10)	22 (9)	24 (11)
V. Books, Printing, etc.	14	14	14 (10)	14 (9)	13 (8)
VI. Other Manufacturing	79	78	78 (36)	77 (37)	80 (41)
VII. Building	52	51	51 (31)	51 (31)	49 (28)
VIII. Mining, Quarrying, etc. ..	16	16	15 (12)	15 (12)	15 (12)
IX. Railway and Tramway Services ..	51	51	50 (33)	51 (33)	51 (28)
X. Other Land Transport	14	13	13 (8)	13 (8)	13 (8)
XI. Shipping, etc.	94	91	56 (31)	54 (26)	54 (24)
XII. Pastoral, Agricultural, etc. ..	8	8	8 (3)	8 (3)	8 (3)
XIII. Domestic, Hotels, etc.	26	23	22 (16)	23 (16)	23 (19)
XIV. Miscellaneous	267	270	263 (128)	289 (127)	287 (128)
Total	797	791	743 382(a)	768 (372)a	759 (369)a
NUMBER OF MEMBERS.					
I. Wood, Furniture, etc.	24,465	23,859	32,279	35,315	37,110
II. Engineering, Metal Works, etc. ..	59,032	68,243	72,750	79,201	82,720
III. Food, Drink, Tobacco, etc. ..	58,663	55,402	58,326	67,255	70,012
IV. Clothing, Hats, Boots, etc. ..	45,842	46,521	44,632	47,932	53,641
V. Books, Printing, etc.	16,249	15,856	16,532	18,592	19,214
VI. Other Manufacturing	38,554	40,376	41,689	44,605	47,671
VII. Building	46,231	51,819	55,314	53,881	57,234
VIII. Mining, Quarrying, etc. ..	37,063	40,996	44,403	46,014	49,179
IX. Railway and Tramway Services ..	89,405	90,365	108,037	114,899	121,300
X. Other Land Transport	16,386	17,785	18,219	20,844	22,137
XI. Shipping, etc...	38,006	37,823	39,309	40,594	42,702
XII. Pastoral, Agricultural, etc. ..	36,584	46,081	48,157	54,173	60,394
XIII. Domestic, Hotels, etc.	20,713	22,861	24,251	25,760	28,313
XIV. Miscellaneous	172,550	171,168	191,824	202,413	220,025
Total	699,743	729,155	795,722	851,478	911,652

(*a*) Allowing for interstate duplication.

(iv) *Trade Unions—Numbers and percentages of Male and Female Members.—Australia.* The Census of 1921 gives the percentage of male and female employees (i.e., persons in "receipt of wages or salary," and persons "unemployed"), 20 years of age and over, on the total male and female population, and by applying these percentages to the estimated total male and female population at the end of each year, an estimate of the number of adult employees of each sex in the year is obtained.

The following table shows separately for males and females (*a*) the number of members of trade unions, (*b*) the estimated number of employees of each sex 20 years of age and over in all professions, trades, and occupations, and (*c*) the percentage of the former (*a*) on the latter (*b*) at the end of each year, 1923 to 1927. The estimated number of employees includes all persons (over the age specified) in receipt of wages or salary, as well as those unemployed, and therefore embraces a large number of adults who are not eligible for membership of any trade union (such as certain persons employed in professional occupations) as well as others who, while eligible for membership so far as the nature of their trade or occupation is concerned, do not reside in a locality which is covered by any union devoted to their particular trade or occupation. Moreover the age at which persons are eligible for membership varies in different unions. The Census results are classified in quinquennial age groups, and age 20 years is taken as approximating to the age of admission to membership. A line has also been added showing the estimated numbers of "junior" workers under 20 years of age.

TRADE UNIONS—NUMBER AND PERCENTAGES OF MALE AND FEMALE MEMBERS—AUSTRALIA 1923 TO 1927.

Particulars.	1923.	1924.	1925.	1926.	1927.
MALES.					
Estimated Total No. of Employees 20 years of age and over	1,149,530	1,175,749	1,200,592	1,240,914	1,267,636
No. of Members of Unions	608,820	640,774	699,399	745,681	793,131
Percentage of Members on Estimated Total Number of Employees	53.0	54.5	58.3	60.1	62.6
Junior Workers (under 20)	213,065	217,925	222,530	230,003	234,944
FEMALES.					
Estimated Total No. of Employees 20 years of age and over	275,081	280,664	286,053	293,594	299,205
No. of Members of Unions	90,923	88,381	96,323	105,797	118,521
Percentage of Members on Estimated Total Number of Employees	33.1	31.5	33.7	36.0	39.6
Junior Workers (under 20)	121,371	123,835	126,212	129,540	132,015

(v) *Interstate or Federated Unions.* The following table gives particulars as to the number and membership of interstate or federated unions in 1927 :—

INTERSTATE OR FEDERATED UNIONS.—AUSTRALIA, 1927.

Particulars.	Unions Operating in—					Total.
	2 States.	3 States.	4 States.	5 States.	6 States. (a)	
Number of Unions ..	16	13	14	20	44	107
Number of Members ..	21,828	42,912	104,965	193,221	377,433	740,359

(a) Certain unions in this group have, in addition to branches in each of the six States, a branch in the Northern Territory.

It appears, therefore, that 107 out of the 369 separate associations and groups of associations in Australia are organized on an interstate basis. The membership of these 107 unions totals 740,359, or 81 per cent. of the membership (911,652) of all unions.

3. Central Labour Organizations.—In each of the capital cities, and in a number of industrial centres elsewhere, delegate organizations, consisting of representatives from a group of trade unions, have been established. Their revenue is raised by means of a per capita tax on the members of each affiliated union. In most of the towns where such central organizations exist, the majority of the local unions are affiliated with the central organization, which is usually known as the Labour or the Trades Hall Council, or the Labour Federation. In Western Australia a unified system of organization extends over the industrial centres throughout the State. In this State there is a provincial branch of the Australian Labour Party, having a central council and executive, and metropolitan and branch district councils, to which the local bodies are affiliated. The central council, on which all district councils are represented, meets periodically. In the other five States, however, the organization is not so close, and, while provision usually exists in the rules of the central council at the capital city of each State for the organization of district councils or for the representation of the central council of the local councils in the smaller industrial centres of the State, the councils in each State are, as a matter of fact, independent bodies.

A new Central Labour Organization, called the Australasian Council of Trade Unions, came into being during 1927. The Council was created to function on behalf of the Trade Unions of the Commonwealth, and was founded at an All-Australian Trade Union Congress, held in Melbourne in May, 1927. The Australasian Council is based on the Metropolitan Trades and Labour Councils in each State : such bodies having the right to appoint two representatives to act on the Executive of the Council. The Metropolitan Trades and Labour Councils are the branches of the Australasian Council, In addition to the representatives from the Metropolitan Councils the Executive consists of four officers, viz., the President, two Vice-Presidents, and a Secretary, who are elected by and from the All-Australian Trade Union Congress. The Metropolitan Councils at Sydney, Melbourne, Brisbane, Adelaide, and Hobart have linked up with the Australasian Council.

The objective of the Council is the socialization of industry, i.e., production, distribution, and exchange. The methods to be adopted are :—(*a*) The closer organization of the workers by the transformation of the Australasian Trade Union Movement from the Craft to an Industrial basis by the establishment of one Union in each industry ; (*b*) the consolidation of the Australasian Labour Movement with the object of unified control, administration, and action : (*c*) the centralized control of industrial disputes.

The table below shows the number of metropolitan and district or local labour councils, together with the number of unions and branches of unions affiliated thereto in each State at the end of the year 1927 :—

CENTRAL LABOUR ORGANIZATIONS.—NUMBER, AND UNIONS AFFILIATED, 1927.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Total.
Number of Councils	3	5	4	2	8	2	1	25
Number of Unions and Branch Unions affiliated ..	98	192	81	65	223	47	3	709

The figures given in the preceding table as to number of unions do not necessarily represent separate unions, since the branches of a large union may be affiliated to the local trades councils in the several towns in which they are represented.

Between the trade union and the central organization of unions may be classed certain State or district councils organized on trade lines, and composed of delegates from separate unions, the interests of the members of which are closely connected by reason of the occupation of their members. Delegate councils of bakers, bread carters, and mill employees, or of unions connected directly or indirectly with the iron, steel, or brass trades, or with the building trades may be so classed.

4. **Laws relating to Conditions of Labour.**—In Official Year Book No. 16, pp. 538 to 566, a conspectus was given of Labour Laws in force in Australia at the end of the year 1922, and of Acts and Regulations relating to Factories and Shops.

Information was contained in the same issue with regard to employment under Mining Acts, followed by a brief reference to Employers' Liability and Workmen's Compensation Acts and miscellaneous legislation relating to conditions of labour enacted by the States. A conspectus of the Tribunals for the Regulation of Wages and Conditions of Labour was also included. Owing to considerations of space these references have been omitted from the present issue.

§ 2. Employers' Associations.

1. **General.**—Recent investigations show that the spirit of association is no less manifest in the case of employers than in the case of workers. Associations for trade purposes merely are not included in the present chapter, which deals with those associations only whose members are united for their own protection, and for representation in cases before Arbitration Courts, Wages Boards and other wage-fixing tribunals. Associations of employers and employees are recognized under the Commonwealth Conciliation and Arbitration Act as well as under several State Acts, and organizations of these bodies may be registered.

2. **Employers' Associations in each State.**—The following table gives particulars of the number of employers' associations in each State at the end of the years 1923 to 1927 :—

EMPLOYERS' ASSOCIATIONS—STATES, 1923 TO 1927.

Year.	N.S.W.	Victoria.	Q'land.	S.A.	W.A.	Tas.	Total.
			NUMBER OF ASSOCIATIONS.				
1923	137	132	85	48	54	24	480
1924	127	135	80	49	53	25	469
1925	133	141	78	52	51	25	480
1926	136	143	72	52	50	25	478
1927	141	136	77	52	52	27	485
			NUMBER OF BRANCHES.				
1923	102	49	54	..	12	8	225
1924	79	41	70	..	12	8	210
1925	480	621	194	1	17	2	1,315
1926	464	617	183	..	16	..	1,280
1927	825	483	109	..	281	1	1,699
			MEMBERSHIP.				
1923	27,027	19,813	12,918	5,101	2,477	2,751	70,087
1924	28,667	21,095	17,060	5,746	2,646	2,716	77,930
1925	38,931	34,274	17,831	6,346	3,369	2,599	103,350
1926	42,666	32,386	21,113	6,572	8,356	2,481	113,574
1927	53,715	31,629	18,381	6,361	10,190	2,464	122,740

The decrease in 1924 in the number of associations is partly explained by the exclusion of certain associations which had been found to be not strictly employers' associations, while, in some cases, associations had become either inactive or defunct. On the other hand, the inclusion of additional associations accounted for the increased membership.

The large increase shown for "Number of Branches" for the years 1925 and 1927 is wholly due to the inclusion of associations representing agricultural interests, while the increase in total membership is partly attributable to a more complete collection of statistics relating to these organizations.

The year 1922 was the first for which information was collected, and detailed particulars for that and subsequent years will be found in previous issues of the Official Year Book.

3. **Employers' Associations in Industrial Groups.**—The figures in the following table refer to Australia at the end of the years 1926 and 1927.

EMPLOYERS' ASSOCIATIONS—INDUSTRIAL GROUPS—AUSTRALIA, 1926 AND 1927.

Class.	Number of Associations.		Number of Branches.		Membership.	
	1926.	1927.	1926.	1927.	1926.	1927.
I. Wood, Furniture, etc. ..	18	18	3	3	1,469	1,606
II. Engineering, etc ..	14	15	..	1	3,485	3,425
III. Food, Drink, etc. ..	93	101	53	64	16,449	18,396
IV. Clothing, Hats, etc. ..	19	19	3	2	2,003	2,386
V. Books, Printing, etc. ..	34	35	..	2	3,285	3,266
VI. Other Manufacturing ..	51	51	5	1	3,013	3,031
VII. Building	26	27	14	19	3,068	3,538
VIII. Mining, Quarrying, etc. ..	13	13	..	..	304	260
X. Other Land Transport ..	18	18	1	24	3,459	2,804
XI. Shipping, etc.	17	14	2	2	240	205
XII. Pastoral, Agricultural, etc.	39	37	1,195	1,575	57,982	65,055
XIII. Domestic, Hotels, etc. ..	17	18	..	..	1,695	1,562
XIV. Miscellaneous	119	119	4	6	17,122	17,206
Total	478	485	1,280	1,699	113,574	122,740

The female membership of these associations was 3,758 for 1926, and 2,186 for 1927.

The organization of employers is relatively strongest in the pastoral and agricultural industries and in the manufacture and distribution of articles of food and drink. In the former case there has been considerable growth in organization among small farmers, and in the latter, the number of small shops purveying foodstuffs of which the proprietors are members of grocers', butchers', and other similar associations accounts for the large membership.

4. **Federations of Employers' Associations.**—In addition to the associations in various industries, there are central associations in each State, to which many of these separate organizations are affiliated. Examples of this kind of association are provided in the Chamber of Manufactures, Chamber of Commerce, and Employers' Federation in each State. Further, these State associations are, in some cases, organized on a federal basis, e.g., there is an Associated Chamber of Manufactures, an Associated Chamber of Commerce, or a Central Council of Employers, to which State branches are affiliated.

The affiliation of these associations is, however, of a very loose nature when compared with that of the Federated Trade Unions. Whereas in the latter case the central body has complete control of its state branches, in the case of the Employers' Associations each state body enjoys complete independence, the central body acting in a more or less advisory capacity only.

The following table gives particulars, so far as can be ascertained, of interstate or federated associations having branches in two or more States in 1923 to 1927 :—

INTERSTATE OR FEDERATED EMPLOYERS' ASSOCIATIONS, 1923 TO 1927.

Particulars.	Associations Operating in—					Total.
	2 States.	3 States.	4 States.	5 States.	6 States.	
			NO. OF ASSOCIATIONS.			
1923	4	4	4	5	12	29
1924	2	6	6	11	9	34
1925	3	5	4	10	8	30
1926	4	3	5	8	8	28
1927	4	1	4	9	14	32
			NO. OF MEMBERS.			
1923	679	2,028	465	16,521	26,832	46,525
1924	427	595	829	29,612	26,523	57,986
1925	3,899	535	634	20,549	25,778	51,395
1926	534	432	1,861	24,118	25,950	52,895
1927	352	315	1,655	40,548	37,654	80,524

The above table shows that associations having 66 per cent. of the total membership (122,740) of employers' organizations are grouped together on an interstate basis.

CHAPTER XIV.

DEFENCE.

§ 1. Military Defence.

1. **State Systems.**—A detailed historical account of the Australian defence forces prior to Federation will be found in Official Year Book No. 2, pp. 1075–1080. See also Official Year Book No. 12, p. 999.

The strength of the military forces of the States on the 31st December, 1900 (the eve of Federation) was:—New South Wales, 9,338; Victoria, 6,335; Queensland, 4,028; South Australia, 2,932; Western Australia, 2,696; Tasmania, 2,024; total for Australia, 27,353. This total was exclusive of cadets, reservists, and rifle club members.

2. **Commonwealth System.**—(i) *General.* Under the terms of the Constitution Act 1900, the Commonwealth took over control of defence matters in March, 1901. The growth of the Commonwealth Military Forces may be considered to have taken place in three phases, viz.:—

(*a*) The first phase, *i.e.*, the welding together of the military forces of the States into one homogeneous army, was entrusted by the Government in 1902 to Major-General Sir Edward Hutton, K.C.B., K.C.M.G., and a sound foundation was laid, upon which the subsequent organization and training were based.

(*b*) The second phase was the introduction of Universal Training in 1911. During the year 1909 a measure providing for universal training was enacted, and the scheme came into force in 1911 after the advice and recommendations of the late Lord Kitchener had been obtained. By the Defence Acts of 1903 and 1904 all male inhabitants between the ages of 18 and 60 years were made liable to serve in Australia with the defence forces in *time of war.* The more recent Acts make training and service compulsory up to the age of 26 years *in time of peace.* By the Act of 1909 the principle of universal liability to training was made law for the first time in any English-speaking community. More detailed reference to these matters will be found in Official Year Book No. 12, p. 999 *et seq.*

(*c*) The third phase, Divisional Organization, came into operation from the 1st May, 1921. Under this system a war organization, evolved from the Australian Imperial Force, is applied to peace conditions, with a minimum of permanent staff and forces. Numbers of units and formations have been altered to correspond with those of the A.I.F. and every effort is being made to maintain the traditions established by those units in the Great War.

(ii) *Military Population.* In connexion with the numbers available, the figures of male population are of interest. The total number at cadet age, *i.e.*, between 12 and 18, at the Census of 1921 (4th April) was about 300,000; at citizen soldier age, *i.e.*, between 18 and 26, 354,000; these latter, with 409,000 at ages between 26 and 35, give 763,000 as the total males at the best period for military service. It is estimated that 529,000 of those available between the ages of 18 and 35 were not married or widowers without children, and 233,000 were married or widowers with children. In addition, there were about 768,000 between the ages 35 and 60.

(iii) *Allotment of Units.* The organization is territorial, and the divisions based upon infantry units. There are 60 battalions, forming 15 brigades. The areas have approximately equal numbers of males of citizen soldier age, and each furnishes a battalion of infantry, and a proportion of other troops.

ALLOTMENT OF UNITS TO AREAS, 1st AUGUST, 1927.

State.	Military District.	Brigade Areas.	Battalion Areas.									
				Providing the undermentioned Units—								
							Medium Artillery.		Heavy Artillery.			
			Number of Areas.	Infantry Battalions.	Light Horse Regiments.	Field Artillery Batteries.	Brigade Head-quarters.	Batteries.	Brigade Head-quarters.	Batteries.	Artillery Survey.	Anti-aircraft Battery.
New South Wales ..	2nd	5	20	21	7	17	1	3	1	4	1	1
Victoria	3rd	5	20	21	6	17	1	3	1	2	1	..
Queensland ..	1st	2	8	8	4	7	..	..	..	2	..	..
South Australia ..	4th	1	4	4	4	4	..	..	..	1	..	..
Western Australia ..	5th	1	3	3	1	3	..	..	..	2	..	..
Tasmania	6th	1	3	3	1	2	..	..	..	1	..	..
Total ..	..	15	58	60	23	50	2	6	2	12	2	1

State.	Military District.	Battalion Areas.											
		Providing the undermentioned Units—											
		Field Engineers.			Signals.			A.A.M.C.		A.A.O.C.			
		Companies.	Troops.	Fortress Engineers.	Sections.	Troops.	A.S.C. Companies.	Field Ambulance.	Field Hygiene Sections.	Company Head-quarters.	Sections.	A.A.V.C. Sections.	Training Areas.
New South Wales	2nd	7	3	2	18	4	10	8	3	2	8	4	36
Victoria ..	3rd	7	3	1	18	4	10	7	2	2	8	4	25
Queensland ..	1st	2	1	1	7	1	3	3	1	..	2	1	10
South Australia..	4th	1	1	..	2	1	2	2	2	..	2	1	7
Western Australia	5th	1	..	..	4	..	1	1	1	..	..	..	6
Tasmania ..	6th	1	..	1	3	..	1	1	1	..	..	..	4
Total ..	..	19	8	5	52	10	27	22	10	4	20	10	88

(iv) *Strength of Military Forces.* (*a*) *Districts.* There was little alteration in the numbers serving in the Australian military forces from the institution of the Commonwealth to the year of the introduction of the compulsory training system. From 1913 to 1918, however, the annual increase was considerable. As a result of the International Conference which met at Washington on the 11th November, 1921, it was decided by the Australian Government in 1922 that the universal training law is to be continued, but its operation is to be restricted to the more populous centres and to certain quotas only. From 1st July, 1922, to 30th June, 1925, training in the Senior Cadets was limited to two quotas instead of four, and in the Citizen Forces to two quotas instead of seven. Since 1st July, 1925, Senior Cadet training has been reduced to one quota only, while Citizen Force training has been increased to three quotas. Senior Cadet training now commences on 1st July of the year in which Senior Cadets reach the age of 17 years, and on 1st July of the following year they are allotted to the Citizen Forces, in which training continues until the 30th June of the year in which the trainee attains the age of 21 years. Notwithstanding these reductions in training, the liability to register at the age of 14 years and to serve for the full period prescribed by the Defence Act remains. Junior Cadet training of boys of the age of 12 and 13 years was in abeyance during the years 1922–23 and 1923–24, but has been resumed as an activity of the Defence Department as from 1st July, 1924. The existing Divisional Organization of the Field Force is being retained in skeleton form, units being maintained at considerably below war strength.

TRAINING STRENGTH OF MILITARY FORCES, 1901, 1913, AND 1922 TO 1927.

(a) District.	1901. (b) 1/3/01.	1913. 30/6/13.	1922. 31/12/22.	1923. 31/12/23.	1925. 1/2/25.	1926. 1/8/26.	1927. 1/8/27.
Hd.-Qrs. (c) ..	..	277	499	58	130	158	191
1st (Q'ld.) ..	4,310	4,625	4,319	4,212	4,263	4,908	5,108
2nd (N.S.W.) ..	9,772	12,105	14,561	15,211	15,420	17,249	17,231
3rd (Vict.) ..	7,011	10,840	11,117	11,825	11,847	14,347	14,152
4th (S. Aus.) ..	2,956	3,228	3,452	3,828	3,772	4,235	4,116
5th (W. Aus.) ..	2,283	1,685	2,018	2,170	2,205	2,399	2,486
6th (Tas.) ..	2,554	1,777	1,190	1,299	1,252	1,338	1,351
Total ..	28,886	34,537	37,156	38,603	38,889	44,634	44,635

(a) Approximately conterminous with boundaries of States. (b) Date of taking over the military forces from States by Commonwealth. (c) Including cadets at Royal Military College of Australia, and Staff Corps Officers abroad or training with other Commonwealth Departments.

(b) *Various Arms.* The numbers of the different arms of the service on the 1st August, 1927, were as follows :—

ARMS OF THE COMMONWEALTH MILITARY FORCES, ACTIVE LIST, 1st AUGUST, 1927.(a)

Light Horse	4,001	Ordnance (including Armament Artificers)	268
Field Artillery	5,755	Survey Section (Engineers) ..	14
Garrison Artillery	2,582	R.A.E. (Works Section) ..	19
Field Engineers	2,600	Royal Military College (Cadets)	75
Signallers	1,697	Provost Staff	15
Fortress Engineers	369	Legal Department	36
Infantry	22,633	Intelligence Section G.S. ..	13
Army Service Corps	1,946	Engineer and Railway Staff Corps	59
Army Medical Corps	1,529		
Army Veterinary Corps ..	199		
Australian Instructional Corps ..	592	Grand Total	44,635
Staff Corps	233		

(a) Excluding civilian staff.

(c) *Classification of Land Forces.* The following table shows the strength of the land forces in each State, classified according to nature of service, on the 1st August, 1927 :—

DISTRIBUTION OF LAND FORCES,(a) ACTIVE AND RESERVE LISTS, 1st AUGUST, 1927.

Branch of Service.	Army Head-quarters.	1st Military District. (Qld.)	2nd Military District. (N.S.W.)	3rd Military District. (Vic.)	4th Military District. (S. Aus.)	5th Military District. (W. Aus.)	6th Military District. (Tas.)	Total.
Permanently employed ..	(b) 181	145	643	504	89	124	62	1,748
Citizen soldiers	10	4,963	16,588	13,648	4,027	2,362	1,289	42,887
Unattached List of Officers	..	41	113	94	33	42	23	346
Reserve of Officers ..	..	1,073	2,933	2,881	762	568	302	8,519
Chaplains	7	50	125	112	35	27	20	376
Total	198	6,272	20,402	17,239	4,946	3,123	1,696	53,876

(a) Excluding civilian staff. (b) Including cadets at Royal Military College of Australia and Staff Corps Officers stationed abroad and training with other Commonwealth Departments.

(*d*) *Numbers Serving under Compulsory Provisions.* (*1*) *General.* The following tables show the numbers registered and training under the compulsory system, distinguishing Citizen Forces and Senior Cadets.

(*2*) *Citizen Forces 1906, 1907, and 1908 Quotas.* Registrations under these quotas at the 30th June, 1927, are given hereunder.

UNIVERSAL TRAINING.—CITIZEN FORCES REGISTRATIONS, QUOTAS IN TRAINING (1906, 1907 AND 1908 QUOTAS), AT 30th JUNE, 1927.

Military Formations and Districts.	1908 Quota.	1907 Quota.	1906 Quota.	Total.
1st Division	3,930	4,296	4,783	13,009
2nd Division	7,446	7,885	7,691	23,022
3rd Division	5,467	5,725	5,707	16,899
4th Division	3,152	3,503	3,631	10,286
11th Mixed Brigade	4,084	4,264	4,212	12,560
Field Troops, 4th M.D.	2,998	2,834	2,950	8,782
Field Troops, 5th M.D.	1,759	1,925	1,777	5,461
Field Troops, 6th M.D.	1,052	1,101	1,163	3,316
5th District Base	39	1	..	40
Total	29,927	31,534	31,914	93,375

(*3*) *Registrations, 1901 to 1905 Quotas.* Figures relating to these quotas have been included in the next table :—

CITIZEN FORCES.—REGISTRATIONS, QUOTAS NOT IN TRAINING (1901 TO 1905 QUOTAS), AT 30th JUNE, 1927.(*a*)

Military Districts.	Total Registrations in Training Areas.					Total.
	Quota, 1901.	Quota, 1902.	Quota, 1903.	Quota, 1904.	Quota, 1905.	
1st	4,453	4,260	3,673	4,154	4,163	20,703
2nd	9,970	10,451	10,968	12,052	11,962	55,403
3rd	7,390	7,248	8,359	9,340	9,354	41,691
4th	2,878	2,805	2,874	3,261	2,868	14,686
5th	1,244	1,347	1,989	2,095	2,026	8,701
6th	1,222	1,181	1,204	1,300	1,294	6,201
Total	27,157	27,292	29,067	32,202	31,667	147,385

(*a*) Latest particulars available, as no training is required of these quotas.

(*4*) *Exemptions and Missing Trainees.* Particulars for the 1906, 1907, and 1908 quotas are given hereunder :—

CITIZEN FORCES.—EXEMPTIONS AND MISSING TRAINEES, QUOTAS IN TRAINING (1906, 1907, AND 1908 QUOTAS), 30th JUNE, 1927.

Military Formations and Districts.	Exemptions.				Missing Trainees.
	1908 Quota.	1907 Quota.	1906 Quota.	Total.	1908, 1907, and 1906 Quotas.
1st Division	1,981	2,593	2,708	7,282	182
2nd Division	4,489	5,058	4,924	14,471	408
3rd Division	2,765	3,032	2,960	8,757	671
4th Division	1,813	2,144	2,238	6,195	332
11th Mixed Brigade	2,692	3,059	3,067	8,818	94
Field Troops, 4th M.D.	1,761	1,687	1,867	5,315	73
Field Troops, 5th M.D.	1,125	1,237	1,222	3,584	14
Field Troops, 6th M.D.	695	806	850	2,351	24
5th District Base	17	1	..	18	..
Total	17,338	19,617	19,836	56,791	1,798

(5) *Senior Cadets—Registrations, etc.* Registrations and numbers in training from the 1909 to 1913 quotas at 30th June, 1927, are shown in the next table :—

SENIOR CADETS.—REGISTRATIONS AND NUMBER ACTUALLY IN TRAINING, 30th JUNE, 1927 (1909 TO 1913 QUOTAS).

Military Formations and Districts.	Total Registrations—Senior Cadets.						Number actually Training—Senior Cadets.
	1913 Quota.	1912 Quota.	1911 Quota.	1910 Quota.	1909 Quota.	Total.	1909 Quota.
1st Division	3,279	3,381	3,428	3,302	3,276	13,387	2,187
2nd Division	5,145	5,512	6,338	6,069	6,074	23,993	3,506
3rd Division	4,567	4,948	4,598	4,813	4,782	19,141	3,092
4th Division	2,518	2,538	2,671	2,257	2,213	9,679	1,312
Field Troops, 4th M.D. ..	2,294	2,354	2,486	2,295	2,243	9,378	1,268
11th Mixed Brigade ..	2,362	3,078	2,891	3,226	3,195	12,390	1,493
Field Troops, 6th M.D. ..	761	955	854	702	591	3,102	290
Field Troops, 5th M.D. ..	1,175	1,332	1,507	1,393	1,345	5,577	681
5th District Base .	52	40	39	43	29	151	23
Total	22,153	24,138	24,812	24,100	23,748	96,798	13,852

(6) *Senior Cadets—Exemptions and Missing Trainees.* Figures regarding these at 30th June, 1927, are shown below :—

SENIOR CADETS.—EXEMPTIONS AND MISSING TRAINEES, 30th JUNE, 1927.

Military Formations and Districts.	Exemptions, 30th June, 1927.					Missing Trainees.
	1912 Quota.	1911 Quota.	1910 Quota.	1909 Quota.	Total.	
1st Division	22	32	885	1,056	1,995	55
2nd Division	89	134	1,571	2,443	4,237	197
3rd Division	17	24	1,389	1,565	2,995	203
4th Division	35	47	708	842	1,632	64
Field Troops, 4th M.D. ..	16	59	818	954	1,847	47
11th Mixed Brigade ..	130	172	1,511	1,658	3,471	47
Field Troops, 6th M.D. ..	44	19	265	285	613	29
Field Troops, 5th M.D. ..	2	11	349	652	1,014	12
5th District Base	..	..	13	6	19	..
Total	355	498	7,509	9,461	17,823	654

(7) *Citizen Forces—Medical Examinations.* The following table shows the results of examinations of the 1908 quota at 30th June, 1927 :—

CITIZEN FORCES.—MEDICAL EXAMINATIONS, 1909 QUOTA, HALF-YEAR ENDED 30th JUNE, 1927.

Military Formations and Districts.	Number of Examinations carried out.	Fit.		Permanently Unfit (A.M.R. 369).		Unfit (other than those under A.M.R. 369).	
		Number.	Percentage.	Number.	Percentage.	Number.	Percentage.
1st Division ..	2,779	1,975	71·1	26	0·9	778	28·0
2nd Division ..	4,732	3,169	67·0	28	0·6	1,535	32·4
3rd Division ..	4,176	2,867	68·7	51	1·2	1,258	30·1
4th Division ..	1,611	1,206	74·9	13	0·8	392	24·3
Field Troops, 4th M.D.	1,863	1,156	62·1	8	0·4	699	37·5
11th Mixed Brigade ..	2,022	1,470	72·7	20	1·0	532	26·3
Field Troops, 6th M.D.	399	284	71·2	6	1·5	109	27·3
Field Troops, 5th M.D.	872	687	78·8	1	0·1	184	21·1
5th District Base ..	22	22	100·0	..	..	..	..
Total ..	18,476	12,836	69·5	153	0·8	5,487	29·7

(v) *Administration and Instruction.* The staff provided for the administration and training of the various arms consists of 233 officers (Staff Corps), 60 quartermasters, and 540 warrant and non-commissioned officers (Australian Instructional Corps).

(vi) *Royal Military College, Duntroon.* This College was established at Duntroon in the Federal Capital Territory for the purpose of providing trained officers for the permanent forces. Admission is by open competitive examination, a definite number of vacancies being allotted to each State on a population basis. Further particulars respecting the College are given on page 915 of Official Year Book No. 15. On 1st February, 1928, the staff numbered 34—military, 22; and civil, 12. The cadets in training at the same date numbered 72.

(vii) *Railways and Defence.* A War Railway Council, consisting of military and railway officers, was instituted in 1911. Its chief duties are to furnish advice and information regarding railway transport for military purposes, and to secure co-operation between the Defence Department and the Railway Departments in regard to concentration and mobilization of troops. To prevent delay in the transport of troops, particularly that caused by the transhipment of baggage and implements of war, the Council has recommended the adoption of a uniform railway gauge on lines linking up the States' capitals. An Engineer and Railway Staff Corps has been instituted, and numbered 59 officers on 1st August, 1927. Fuller details will be found in Official Year Book No. 6, pp. 1070–1.

(viii) *Rifle Clubs.* On the 30th June, 1927, there were 1,114 rifle clubs with a membership of 38,253, and 77 miniature rifle clubs having a membership of 2,961. Members of rifle clubs must fire an annual course of musketry, but do not undergo any systematic drill.

The administration of rifle clubs is under the control of the Secretary for Defence, and rifle clubs do not form part of the military organization. Government grants however are made for the construction and maintenance of rifle ranges, etc., and 200 rounds of ammunition are issued free annually to each efficient member.

§ 2. Naval Defence.

1. State Systems.—Information regarding naval defence systems prior to 1901 will be found in Official Year Book No. 12, p. 1011, but considerations of space preclude its insertion in the present volume.

2. The Present System.—(i) *General.* An outline of the development of Australian naval policy was given in Official Year Book No. 3, pp. 1060–61, and No. 12, p. 1012. Some account of the building of the Australian Fleet, the proposed and modified cost thereof, the compact with the Imperial Government, etc., appears in Official Year Book No. 15, pp. 921 *et seq.* Up to the 30th June, 1927, the expenditure on construction amounted to £10,102,543.

The Washington Conference of 1921 has had a marked effect on Naval Defence schemes, and all warship building and naval base construction were for a time suspended. The Fleet personnel was reduced from 4,843 in 1921 to 3,500 in 1923, and the ships in commission were reduced from 25 to 13. H.M.A.S. *Australia* was sunk in accordance with the provisions of the Washington Treaty on 12th April, 1924.

In 1925 the Commonwealth Government, however, decided to build two cruisers of 10,000 tons (the maximum size at present allowed for new construction under the Washington Naval Treaties), two ocean-going submarines, and a seaplane-carrier. The order for the two cruisers, which have been named *Australia* and *Canberra*, was placed in Scotland. They will be commissioned in 1928, and H.M.A.S. *Australia* will become the Flagship of the Australian Squadron. The two submarines, which were built in England, sailed for Australia on 8th February, 1928. The seaplane-carrier (approx. 6,000 tons), which is being built at Cockatoo Island Dockyard, Sydney, by the Commonwealth Shipping Board, was launched on 23rd February, 1928.

To ensure closer co-operation with the Royal Navy, arrangements have been concluded with the Admiralty for the periodical exchange of a cruiser, thus giving an opportunity for Australian sailors to gain experience in fleet exercises on a large scale.

The British Admiralty have, in addition, lent to the Royal Australian Navy the sloop *Silvio*, which was refitted in England as a surveying ship, and renamed H.M.A.S. *Moresby*. This vessel has been principally employed with H.M.A.S. *Geranium* in surveying the Great Barrier Reef. The Commonwealth Government has also entered into an agreement with the New South Wales Government whereby the latter, in consideration of the payment of a subsidy of £135,000, will construct at Walsh Island, Newcastle, a floating dock capable of lifting 15,000 tons. This dock will be capable of docking the new 10,000-ton cruisers.

(ii) *Naval College.* A naval college was established at Geelong in 1913, and was transferred in 1915 to Captain's Point, Jervis Bay, New South Wales. The course is similar to that carried out in naval colleges in England. In February, 1928, there were 53 cadet midshipmen under training. A boy who reaches the age of thirteen years during the calendar year in which the entrance examination is held is eligible to compete, provided he is the son of natural-born or naturalized British subjects. From amongst those qualified the selection committee chooses the number required. The Commonwealth Government bears the whole expense of uniforms, victualling, travelling, as well as that of the educational course. Altogether 153 officers who have passed through the College are now serving with the Fleet.

(iii) *Training Establishments.* Owing to the heavy cost of maintenance H.M.A.S. *Tingira*, which was commissioned as a training ship, was paid off on 30th June, 1927, and subsequently sold by public tender. For the time being seamen recruits from 17 to 21 years of age will receive their preliminary training at the Naval Depot, Westernport, where, in addition to the new entry school, instruction is given in Gunnery and Torpedo, Signals and Wireless Telegraphy, Engineering, etc. It is intended to establish a Naval Training School at Geelong.

(iv) *The Naval Station.* A description of the limits of the Australian Naval Station is contained in previous issues of the Official Year Book (see No. 18, pp. 608–9), but lack of space precludes its repetition in the present issue. The limits have recently been altered slightly.

(v) *Vessels.* A list of the vessels of the Royal Australian Navy is given hereunder.

SHIPS OF THE ROYAL AUSTRALIAN NAVY, JANUARY, 1928.

Vessel.	Description.	Displacement.	Power.
		Tons.	H.P.
Adelaide	Cruiser	5,500	25,000
Albatross (*a*)	Seaplane Carrier	6,000	12,000
Anzac	Flotilla Leader	1,660	36,000
Australia	Cruiser	10,000	80,000
Brisbane	"	5,400	25,000
Canberra (building)	"	10,000	80,000
Cerberus	Motor-boat	61	220
Penguin	Depot Ship	5,880	12,500
Geranium	Sloop	1,250	2,000
Huon	Destroyer	700	11,300
Mallow	Sloop	1,200	1,800
Marguerite	"	1,250	2,200
Melbourne	Cruiser	5,400	25,000
Moresby	Sloop	1,320	2,500
Oxley	Submarine	1,400	..
Otway	"	"	..
Parramatta	Destroyer	700	9,000
Platypus	Depot Ship	3,460	3,060
Stalwart	Destroyer	1,075	27,000
Success	"	1,075	27,000
Swan	"	700	10,000
Swordsman	"	1,075	27,000
Sydney	Cruiser	5,400	25,000
Tasmania	Destroyer	1,075	27,000
Tattoo	"	1,075	27,000
Torrens	"	700	10,000
Warrego	"	700	9,000
Yarra	"	700	9,000
FLEET AUXILIARIES—			
Biloela	Fleet Collier and Oiler	5,700	2,300
Kurumba	Fleet Oiler	3,970	..

(*a*) Launched 23rd February, 1928.

(vi) *Naval Forces.* Besides the sea-going forces, there is a R.A.N. Reserve, which is composed of Citizen Naval Trainees. The personnel of the sea-going forces, which was originally largely composed of Imperial officers and men, is now more than 90 per cent. Australian. To facilitate the training of the Naval Reserve, destroyers (River Class) which are held in reserve have been stationed in various training districts throughout Australia. The strength of the naval forces is given hereunder.

STRENGTH OF NAVAL FORCES (PERMANENT AND RESERVES), 15th JANUARY, 1928.

Description of Force.	Numbers Borne.		
	In Training.	Officers.	Men.
Royal Australian Navy (Sea-going)	..	454	4,639
Royal Australian Naval Auxiliary Services	..	42	180
Cadet Midshipmen undergoing training at R.A.N. College	53	..	..
Royal Australian Naval Reserve (Sea-going)	..	61	..
Royal Australian Fleet Reserve	..	..	100
Royal Australian Naval Reserve	..	234	5,723
Royal Australian Naval Volunteer Reserve	..	38	20

§ 3. Air Defence.

1. **General.**—A statement in regard to the preliminary steps taken in connexion with the development of air defence will be found in Official Year Book No. 18, p. 610.

The Royal Australian Air Force is administered by a Board consisting of two Air Force members and a Finance member. To this Force is entrusted the air defence of Australia, the training of personnel for co-operation with the naval and military forces, and the refresher training of pilots engaging in civil aviation. The present establishment of the Force includes the following units:—(*a*) Head-Quarters Royal Australian Air Force, with representation at the Air Ministry in London; (*b*) A Flying Training School; (*c*) A Stores Depot; (*d*) Two composite squadrons and one flight; and (*e*) an Experimental Section.

2. **Establishment.**—The present approved establishment of the Permanent Air Force is 110 officers and 860 airmen, and of the Citizen Air Force, 54 officers and 285 airmen.

3. **Aerial Routes.**—Aerodromes and Alighting Sites have been prepared between the capital cities and on certain parts of the coast for service and civil purposes. The total number prepared to date is 164.

4. **Civil Aviation.**—Details regarding the formation and activities of the Civil Aviation Department will be found in Chapter VII., Section D. Aircraft.

§ 4. Expenditure on Defence.

1. **Expenditure, 1901–2 to 1928–29.**—The following table shows Defence expenditure in 1901–2 and during each of the last five years. Details of the expenditure of the Defence Department and the cost of the war and repatriation are given in Chapter VIII.—Finance.

DEFENCE EXPENDITURE.—AUSTRALIA, 1901–2 AND 1924–25 TO 1928–29.

Year.	Naval.		Military.		Air.		Special Defence Provision.	Total Defence Expenditure. (*a*) (*b*)
	Under Ordinary Votes and Appropriations.	Total Naval. (*a*)	Under Ordinary Votes and Appropriations.	Total Military. (*a*)	Under Ordinary Votes and Appropriations.	Total. Air. (*a*)		
	£		£	£			£	£
1901–02 ..	178,819	178,819	777,620	780,260	..	..	..	959,079
1924–25 (*b*) ..	2,016,404	2,219,566	1,551,524	31,324,012	216,544	284,623	988,140	34,816,341
1925–26 (*b*) ..	2,136,113	2,390,500	1,587,550	31,214,009	281,164	425,536	3,742,745	37,772,790
1926–27 (*b*) ..	2,212,716	2,575,410	1,593,309	31,679,561	434,805	591,355	996,729	35,843,055
1927–28 (*b*) ..	2,152,217	2,300,558	1,605,429	31,556,419	428,173	544,287	4,215,911	38,617,175
1928–29 (*b*) (estimated)	2,113,657	2,356,557	1,605,254	33,367,064	464,306	581,306	1,000,000	37,304,927

(*a*) During the war years and subsequently, war expenditure and war expenditure on works included in total. (*b*) Not including War Gratuity (see p. 593).

Note.—In the year 1900–1 the approximate Defence Expenditure by the States was—

Ordinary Services	£800,000
Works, Arms, Equipment, etc.	200,000
Total	£1,000,000

§ 5. Munitions Supply.

1. **General.**—A statement dealing with the powers and functions of the Munitions Supply Board is given on p. 612 of Official Year Book No. 18, but limits of space preclude its repetition in the present volume.

2. **Factories.**—(i) *General.* The Explosives Factories at Maribyrnong, Victoria, which manufacture explosives for cartridges and artillery ammunition, were established in 1911. The staff at 30th June, 1927, numbered 131.

The Acetate of Lime Factory, established at Bulimba, Brisbane, in September, 1918, provides acetate of lime (a raw material used in the manufacture of acetone) and is now being held in reserve. Employees at 30th June, 1927, numbered 5.

The Clothing Factory at Melbourne, Victoria, which had a staff of 249 employees on 30th June, 1927, commenced output in July, 1912, and since that date has been able to supply the whole of the uniform clothing required for the Defence forces, and the Postmaster-General's Department. It also supplies clothing required by State Departments and local public bodies.

The Small Arms Factory at Lithgow, New South Wales, which was opened on 1st June, 1912, and delivered the first instalment of Australian arms in May, 1913, had on its pay roll on 30th June, 1927, 348 employees. Rifles are being produced, and the manufacture of pistols and machine guns has been undertaken.

On 1st January, 1921, by virtue of an agreement with the Colonial Ammunition Company Limited, the Defence Department entered into possession on lease of the Company's works at Footscray, Victoria, but on 1st January, 1927, they were purchased by the Commonwealth Government for the manufacture of rifle and pistol ammunition. The works are known as the Defence Small Arms Ammunition Factory, and the staff at 30th June, 1927, numbered 272.

(ii) *Expenditure on Factories.* The expenditure up to 30th June, 1927, on lands buildings, machinery and plant, factory fittings and furniture in connexion with the factories now in operation was approximately as follows:—Small Arms Factory, £612,076; Explosives Factories, £567,352; Clothing Factory, £40,583; Acetate of Lime Factory, £160,360.

§ 6. Remount Depot.

Information in regard to the establishment of this branch of activity is contained in previous issues of the Official Year Book (see No. 18, p. 613). When war was declared in 1914 little difficulty was experienced by the Remount Service in coping with the enormous task of obtaining and training horses for the mounted units of the A.I.F. and in providing for the shipment of horses to Egypt and India as required.

§ 7. Australian Contingents.

1. **General.**—In previous issues of the Year Book an account was given of the composition, etc., of the Australian contingents despatched for service in the New Zealand and Sudan Campaigns, in South Africa, China, and the Great War of 1914–18 (see Official Year Book No. 12, pp. 1019 *et seq.*).

2. **Australian Troops (Great War).**—Particulars of the enlistments, casualties, honours and decorations won, and engagements of the Australian Imperial Force during the Great War were given in Official Year Book No. 16, pp. 628 *et seq.* Limits of space, however, preclude the repetition of this information in the present volume.

§ 8. War Gratuity.

Reference was made in preceding Year Books (see No. 15, p. 930) to the bonus payable in accordance with the War Gratuity Acts of 1920 as a war service gratuity to soldiers and sailors who served in the Great War. Owing to limitations of space this information cannot be repeated, but it may be noted that the gratuity was paid in Treasury bonds, maturing not later than 31st May, 1924, and bearing interest at 5½ per cent. In necessitous cases payment was made in cash when desired by the person entitled. The first gratuities were made available about the beginning of June, 1920. The gratuities numbered 360,000, and the total amount paid was £27,424,317.

§ 9. Special Defence Legislation.

Information regarding special defence legislation enacted by the Commonwealth Government during the War was given in Official Year Book No. 15, p. 930. It may be pointed out here that the War Precautions Act Repeal Act of 1920 repealed the Act 1914–18, but a limited number of matters dealt with under the original Act are now provided for under the War Precautions Act Repeal Act of 1920 or by regulations made thereunder.

§ 10. Repatriation.

1. **General.**—An outline of the activities leading up to the formation of the Commonwealth Department of Repatriation was given in Official Year Book No. 15, p. 931, but limits of space preclude its repetition in the present volume. Some account was given also in the Year Book referred to, and in subsequent issues, of the policy and activities of the Department generally, while detailed information was incorporated in regard to such matters as sustenance rates and pensions to soldiers and dependents. (See Official Year Book 17, pp. 598 to 601.)

The main activities of the Repatriation Commission at 30th June, 1927, were confined to the grant, review and assessment of war pensions, medical treatment, the provision and renewal of artificial limbs and surgical aids, the grant and review of living allowances, and the administration of the Soldiers' Children Education Scheme.

2. **Pensions.**—The pensions in force on the 30th June, 1927, numbered 259,821 and the amount expended thereon during the twelve months ending 30th June, 1927, was £7,477,096.

3. **Summary of Activities.**—The following is a summary of the work of the Department from 8th April, 1918, to 30th June, 1927 :—

(i) *Employment.* Number of applications, 249,659 ; number of positions filled, 132,316.

(ii) *Vocational Training.* Number of men completed training, 26,473 ; number in training, 578.

(iii) *Assistance other than Vocational Training and Employment.* Applications received, 680,284 ; applications approved, 594,575.

(iv) *Soldiers' Children Education Scheme.* From the inauguration of the scheme in February, 1921, up to 30th June, 1927, 9,389 applications for assistance had been received. Of these 8,246 had been approved, of which 2,236 recipients of the benefits had completed their training, 4,994 were undergoing training, 54 applications were pending, and the remainder had been refused or withdrawn.

It is estimated that the scheme will involve an outlay of £1,250,000, of which the Commonwealth has undertaken to provide £800,000, while it is hoped that the balance will be forthcoming from private and public funds and benefactions. Up to 30th June, 1927, the expenditure was £580,177.

(v) *Assistance Granted.* The total expenditure incurred during the period 8th April, 1918, to 30th June, 1927, was £15,467,567, of which £8,933,228 represented gifts, £1,672,042 loan, and £4,862,297 general expenditure. Of the total the largest amounts were absorbed by vocational training, with £5 millions, and expenses of providing employment, £2½ millions.

(vi) *Medical Treatment.* At 30th June, 1927, there were 1,461 in-patients and 4,982 out-patients receiving medical treatment. The expenditure to this date was £3,749,015.

4. **Settlement of Soldiers on the Land.**—At the Premiers' Conference in Melbourne in 1917 it was agreed that the States should undertake the work of settling on the land returned soldiers and munition and war workers, but that the Commonwealth should finance them for this purpose.

The original arrangement provided that the Commonwealth should take the responsibility of finding up to £500 per settler as working capital for improvements, implements, seed, etc., an amount which was subsequently increased to £625 per settler, together with £375 per settler for resumptions and works incidental to land settlement approved by the Commonwealth. Particulars of the advances to the States are shown in the following table :—

ADVANCES TO STATES FOR SOLDIER SETTLEMENT, AT 30th JUNE, 1927.

State.	No. of Settlers.	Advances agreed upon.	Advanced during 1926–27.	Advanced to 30th June, 1927.	Advances outstanding 30.6.27.
	No.	£	£	£	£
New South Wales ..	8,405	12,254,191	..	9,826,203	9,805,984
Victoria..	11,000	15,708,514	..	11,968,176	11,794,075
Queensland	3,898	3,290,789	..	2,717,697	2,700,583
South Australia	5,000	6,265,471	..	2,857,780	2,833,005
Western Australia ..	5,186	6,278,750	..	5,463,782	5,431,202
Tasmania	2,821	3,521,234	..	2,168,303	2,129,563
Total ..	36,310	47,318,949	..	35,001,941	34,694,412

Prior to the occupancy of the land, the Repatriation Department was empowered to pay sustenance for a limited period, subject to certain conditions, also for 6 months during the first 2 years of occupancy while awaiting production.

5. **Conspectus of State Laws affecting Settlement of Returned Soldiers on the Land.**—In Official Year Book No. 13, pp. 1018 *et seq.*, will be found a table giving particulars of the laws of the various States relating to returned soldiers' land settlement.

Later modifications have been made with a view to simplifying procedure and liberalizing the conditions under which holdings may be acquired.

§ 11. War Service Homes.

The operations of the War Service Homes Commission at 31st December, 1927, may be briefly set out as follows :—31,772 applications involving advances amounting to approximately £22,172,583 had been approved ; 17,267 houses had been completed ; 29 applicants had been assisted to complete or enlarge dwelling-houses partly owned ; 761 houses were in course of construction ; and 341 building applications had been approved in respect of which building operations had not been commenced.

In addition, the Commission had purchased on behalf of eligible applicants 12,368 already-existing properties, and had taken over mortgages existing on 2,137 dwelling-houses, and 3,346 transfers were approved. In a number of cases, however, actual settlement and transfer had not taken place. Applications in respect of 14 completed houses had not, however, been definitely approved, but pending this action the majority of the houses are occupied by the applicants under a weekly tenancy agreement.

The foregoing figures include the operations of the State Bank of South Australia and the State Savings Bank of Victoria, which are now carrying out the provisions of the War Service Homes Act in their respective States, the Commonwealth's obligations being to make available to the Government in each State as a loan the funds required for the purpose.

CHAPTER XV.

THE TERRITORIES OF THE COMMONWEALTH.

A. GENERAL

1. **Classification.**—The Territories of, or under the control of, the Commonwealth are of three classes—

(*a*) Territories originally parts of the States which have been surrendered by the States to the Commonwealth. These are the Northern Territory (formerly part of the State of South Australia) and the Federal Capital Territory (formerly part of the State of New South Wales).

(*b*) Territories, not parts of States, which have been placed under the authority of the Commonwealth by Order in Council under section 122 of the Constitution. These are Papua and Norfolk Island.

(*c*) Territories which have been placed under the administration of the Commonwealth by Mandate issued by the League of Nations. These are the Territory of New Guinea and (administered in conjunction with the British and New Zealand Governments) Nauru.

The Territories in class (*a*) only are parts of the Commonwealth.

2. **Forms of Executive Government.**—The Territories differ in their forms of Government. Papua is administered by a Lieutenant-Governor and a nominated Executive Council, who, except in matters of high policy and in certain matters prescribed by law, are not controlled by the Commonwealth Government. Norfolk Island and the Territory of New Guinea are each under an Administrator who is controlled by the Commonwealth Government; and in each of these Territories there is an Advisory Council. The Northern Australia Act 1926 divided the Northern Territory into two parts, one comprising the area north of the 20th parallel of south latitude, and the other the area south of that line. The Act provided for a Government Resident in each part and for a Development Commission directly under the Minister for Home and Territories. In the Federal Capital Territory some local institutions under the law of New South Wales continue, otherwise the Federal Capital Commission has definite responsibilities in regard to the government. In Nauru the Executive Government is vested in an Administrator who is subject only to the general control of the Government controlling the Administration.

3. **Legislative Power.**—The laws of the Parliament of the Commonwealth are in force in the Territories which are parts of the Commonwealth, but are not applicable to the Territories not parts of the Commonwealth, unless expressly extended thereto.

In Papua, there is a nominated Legislative Council, which has full power of legislation, subject to the assent of the Governor-General. In New Guinea, the Northern Territory, Norfolk Island and the Federal Capital Territory, there are no Legislative Councils, and Ordinances are made for these Territories by the Governor-General, subject to such Acts of the Parliament of the Commonwealth as are in force there.

In Nauru the legislative power is vested in the Administrator, subject to instructions from the Governments controlling the Administration.

4. **Laws.**—In the Northern Territory, Papua and Norfolk Island, the laws existing at the dates when these territories came under the control of the Commonwealth have remained in force, subject to later legislation by or under the authority of the Commonwealth Parliament; in the Federal Capital Territory there still remain in force some of the laws of the State of New South Wales; in New Guinea, the former German law was repealed at the date of the establishment of civil government.

Three volumes containing the "Statute Law of the Territory of Papua" in force on 31st December, 1916, were published by the Government Printer, Port Moresby, in 1918 and 1919; subsequent Ordinances and the regulations under Acts and Ordinances are published in the *Government Gazette* of Papua and in annual volumes. The South Australian statutes in force in the Northern Territory will be found in the collected editions and annual volumes of the State of South Australia: Ordinances made by the Governor-General are published in the *Commonwealth of Australia Gazette*, and regulations under

Ordinances in the *Northern Territory Gazette.* The laws in force in Norfolk Island at the time of its coming under the control of the Commonwealth were collected in the *New South Wales Government Gazette* of 24th December, 1913, and printed separately as "The Consolidated Laws of Norfolk Island"; Ordinances made by the Governor-General and regulations made by the Administrator, are published in the *Commonwealth of Australia Gazette.* Ordinances made by the Governor-General for the Federal Capital Territory are published in the *Commonwealth of Australia Gazette.* Ordinances made by the Governor-General for the Territory of New Guinea are published in the *Commonwealth of Australia Gazette*, and regulations made by the Administrator in the *New Guinea Gazette*; the statute law in force in New Guinea on 31st December, 1925, has been published as Vols. I.–IV. of "Laws of the Territory of New Guinea," and subsequent Ordinances and regulations are collected in annual volumes. Ordinances made by the Administrator of Nauru are promulgated locally and are printed in the annual report to the League of Nations on the Administration of Nauru.

5. **Finances.**—Papua is autonomous in its finances, but receives an annual grant from the Commonwealth Government. The Administration of the Northern Territory is maintained by the Commonwealth Government; a grant is made towards the expenses of administration of Norfolk Island, but taxes are raised locally which meet part of the expenditure; expenditure in the Federal Capital Territory is defrayed by the Commonwealth; New Guinea has its own budget, and the local revenues have hitherto been sufficient to maintain the Administration; Nauru is self-supporting.

The sum expended by the Commonwealth Parliament in 1926–27 on the Territories outside the Commonwealth was £82,572, exclusive of £53,092 for mail services to these Territories and to other islands in the Pacific.

B. THE NORTHERN TERRITORY.

§ 1. Area and Population.

1. **Introductory.**—Upon the extension of New South Wales westward to the 129th meridian in 1827, the Northern Territory was incorporated in that colony (see Chapter I.), and in 1863 was annexed by Royal Letters Patent to the province of South Australia. With the adjacent islands, it was transferred to the Commonwealth on 1st January, 1911.

2. **Area and Boundaries.**—The total area of the Territory is 523,620 square miles, or 335,116,800 acres. Its length from north to south is about 900 miles, while its breadth from east to west is 560 miles. Its eastern boundary, dividing it from Queensland, is the 138th meridian of east longitude; and its western boundary, separating it from Western Australia, the 129th meridian. Its southern boundary is the 26th parallel of south latitude, dividing it from South Australia. The northern boundary is the coast line of those parts of the Indian Ocean known as the Timor and Arafura Seas. Near the mouth of the Wentworth River, in the Gulf of Carpentaria, the coast line is met by the eastern boundary; at Cape Domett, near Cambridge Gulf, the western boundary cuts the northern coast line. The length of coast line is about 1,040 miles, or 503 square miles of area to one mile of coast line.

3. **Population.**—(i) *Europeans.* The problem of increasing the European population of the Northern Territory is one of considerable difficulty. Its solution will, of course, depend on the economic development of the country, and past experience tends to show that the task of developing its resources will involve large expenditure. At the Census taken in 1881 there were only 670 Europeans in the Territory. The total increased slowly, reaching its maximum in 1919 with 3,767 persons. Owing mainly to the closing down of the meat works at Darwin a decline then took place, and at the Census taken in 1921 the white population had decreased to 2,459, while on 30th June, 1927, it was approximately 2,800.

(ii) *Asiatics.* With the exception of a few Japanese, Filipinos and others, the Asiatics in the Northern Territory consist mainly of Chinese. The South Australian Government introduced 200 Chinese in the early seventies to assist in the promotion of agriculture, while the discovery of gold resulted in many others coming on their own account. Their numbers increased considerably in connexion with the construction of the railway from Darwin to Pine Creek, in 1887–88, and there were at that time upwards of 4,000 Chinese in the Territory. The total gradually dwindled thereafter, and the number at the Census of 1921 was only 722. The total number of all non-European persons (excluding Aboriginals), is approximately 1,050.

(iii) *Total Population.* The highest recorded population of all races, except aboriginals, was 7,533 in 1888, while at the end of 1927 it was 4,361. The estimated population for the last five years is given in the following table :—

NORTHERN TERRITORY.—POPULATION (EXCLUSIVE OF ABORIGINALS), 1923 TO 1927.

Year.	Males.	Females.	Total.
1923	2,527	1,028	3,555
1924	2,538	1,059	3,597
1925	2,550	1,106	3,656
1926	2,773	1,125	3,898
1927	3,137	1,224	4,361

The Census population (4th April, 1921) was 2,821 males, 1,046 females, total, 3,867.

(iv) *Movement of Population.* The following is a summary of movement of population in 1927 (excluding overland migration) :—

NORTHERN TERRITORY.—MOVEMENT OF POPULATION, 1927.

Immigration ..	1,163	Emigration ..	692	Excess of immigration over emigration ..	471
Births	68	Deaths ..	76	Excess of births over deaths ..	—8
Increase ..	1,231	Decrease ..	768	Net Increase ...	463

The immigration and emigration of the Territory for the five years ending 1927 are shown in the following table :—

NORTHERN TERRITORY.—MIGRATION, 1923 TO 1927.

Year.	Immigration.	Emigration.
1923	438	468
1924	496	467
1925	567	511
1926	731	498
1927	1,163	692

(v) *The Aboriginals.* A special article contributed by Dr. W. Ramsay-Smith on the subject of the Australian aboriginals, was incorporated in Year Book No. 3 (pp. 158–176). The chapter "Population," in Year Book No. 17, contained information regarding the number and distribution of aboriginals and the measures taken by the States (in the case of the Northern Territory, by the Commonwealth) to protect and preserve the aboriginals. In the Northern Territory large numbers of the aboriginals are still outside the influence of Europeans. At the last Census, 2,050 full-blood aboriginals, in the employ of whites or living in the vicinity of European settlements, were enumerated. Of these 1,184 were males and 866 females. The total number of full-blood aboriginals in the Territory at 30th June, 1927, was estimated at 20,258. The greatest difficulty which confronts the Administration in dealing with the natives is due to the circumstance that they are nomads, without fixed abode, merely wandering about hunting for native food within the limits of their tribal boundaries, and making no attempt at cultivation or other settled industry. In their natural state, compared with those of other tropical countries, the natives are very healthy, but in contact with new settlers, white or Chinese, they rapidly fall victims to disease, and to degradation from drink or opium. (See Chapter XXIV. Population, § 8.3 hereinafter.)

§ 2. Legislation and Administration.

1. Transfer to Commonwealth.—(i) *The Northern Territory Acceptance Act.* A short historical sketch is given in Year Book No. 6, pp. 1113–4. On 1st January, 1911, the Territory was transferred by South Australia to the Commonwealth, upon terms previously agreed upon by the respective Cabinets, and ratified by the Commonwealth *Northern Territory Acceptance Act* (No. 20 of 1910). The terms were outlined in Official Year Book No. 15, page 940.

(ii) *The South Australian Surrender Act.* The State Act approved and ratified the agreement surrendering the Territory.

2. Administration.—(i) *The Northern Territory (Administration) Act, 1910.* The Act provided for the appointment of an Administrator and officials South Australian laws were declared to continue in force as laws of the Territory, and certain Commonwealth Acts to apply. Power was given to the Governor-General to make Ordinances having the force of law.

(ii) *Northern Australia Act, 1926.* Under this Act the Territory is divided into two parts separated by the 20th parallel of south latitude, each administered by a Government Resident, while, in addition, a Development Commission is provided. The above officers were appointed and took charge as from 1st March, 1927.

(iii) *Northern Territory Ordinances.* In Official Year Book No. 18, pp. 619-20, a summary was given of the main provisions of the Ordinances passed up to June, 1924. For similar information regarding Ordinances passed during 1925, see Official Year Book No. 19, page 87; during 1926, No. 20, page 103; and during 1927, page 85, of this issue.

3. Representation in Commonwealth Parliament.—The Northern Territory elects a member to the House of Representatives. He is not entitled to vote, but may take part in any debate in the House. (See Year Book No. 19, p. 563.)

§ 3. Physiography.

1. Tropical Nature of the Country.—The Territory is within the torrid zone, with the exception of a strip 2½ degrees wide, which lies south of the Tropic of Capricorn.

2. **Contour and Physical Characteristics.**—The low flat coast line seldom reaches a height of 100 feet. Sandy beaches and mud flats, thickly fringed with mangroves, prevail. Sandstone, marl, and ironstone form the occasional cliffy headlands. The sea frontage of more than 1,000 miles is indented by bays and inlets, and intersected by numerous rivers, many of which are navigable for considerable distances from their estuaries.

The principal features of the coast line are enumerated in Year Book No. 1, p. 66; the rivers in Year Book No. 2, p. 76; the mountains in Year Book No. 3, p. 67; the lakes in Year Book No. 4, p. 77; the islands in Year Book No. 5, pp. 71, 72, and the mineral springs in Year Book No. 6, p. 65.

Inland, the country generally is destitute of conspicuous landmarks. From the coast there is a general rise southwards to the vicinity of the 17th or 18th parallel of south latitude, where the higher lands form the watershed between the rivers that flow northwards to the sea and those that form the scanty supply of the interior systems. Towards the centre of the continent the land over a wide area is of considerable elevation, and there are several mountain ranges, generally with an east and west trend.

§ 4. Climate, Fauna and Flora.

1. **The Seasons.**—There are two main climatic divisions—the wet season, November to April, and the dry season, May to October, with uniform and regular changes of weather. Nearly the whole of the rainfall occurs in the summer months. Fuller particulars will be found in Year Book No. 6, p. 1116.

2. **Fauna.**—The ordinary types of native Australian fauna inhabit the Territory. As elsewhere on the continent, the higher *Theria* are rare, but marsupials, birds, crocodiles, fresh-water tortoises, snakes (mostly non-venomous), and frogs abound. There are many varieties of freshwater fish and littoral mollusca. Butterflies and beetles are strongly represented. The white ant is a pest, anthills in the Territory sometimes attaining great dimensions. Mosquitoes and sandflies are very troublesome, particularly in the wet season. Native fauna are in some cases protected. Buffalo formerly existed in large herds, but their numbers have been greatly reduced by indiscriminate shooting in recent years.

3. **Flora.**—The vegetation is North Australian in type, but a number of the forms belongs to the Malayan and Oceanic regions. The timber trees are not of great commercial value, but in the coastal regions tropical vegetation grows luxuriantly to the water's edge. On the wide expanses of plain country in the interior there is little vegetation. The principal orders represented in the Territory are:—*Euphorbiaceæ, Compositæ, Convolvulaceæ, Rubiaceæ, Goodenoviaceæ, Leguminosæ, Urticeæ.*

Fuller particulars regarding fauna and flora are given in Year Book No. 6, pp. 1116–7.

§ 5. Production.

1. **Agriculture.**—Up to the present agriculture has made little progress in the Territory, although it has been proved that rice, tobacco, coconuts, mangoes, bananas, cotton, various fodder plants, and peanuts can be successfully grown. Expense of harvesting is, at present, an obstacle to the economic production of rice, and until labour-saving machinery is procured it cannot be produced with profit. Some 5 miles from Darwin a coconut plantation, about six acres in area, is thriving, and at a small plantation at Shoal Bay the palms planted along the sea-shore are giving excellent results. There is a large stretch of first-class coconut land on the coast, but hitherto planting has not been attempted on a commercial scale. Cotton was planted in 1924 by settlers at Stapleton, Grove Hill, Daly Rivers, Pine Creek, and the Katherine, and there were experimental

plots at Mataranka, Borroloola, and on the lower Roper River. The small number of settlers and the difficulty in obtaining labour for picking militate against progress. Native labour is very uncertain, and the time of picking comes at a period of the year when the aboriginals can get plenty of native food. In 1926 only 40 acres were under cotton compared with 123 acres in 1925. The year 1927 shows a further decline. Peanuts have become the principal crop in the Northern Territory and, in spite of the unfavourable season, about 40 tons of nuts were harvested last season.

2. Pastoral Industry.—The pastoral possibilities of certain parts of the Northern Territory were recognized at an early date, and in 1866 stock was brought into the Macdonnell Range country from South Australia. Six years later cattle were brought from Queensland to the northern parts of the Territory, and in 1879 Mr. Giles reached the Katherine River with 2,000 head of cattle and 12,000 sheep from South Australia. For various reasons sheep-raising did not succeed. The cattle industry progressed slowly, and the number of cattle on 31st December, 1926, was about 863,600. A great impetus was given to this industry in 1917 by the opening of extensive meat works at Darwin. Unfortunately the works closed down in 1920, but they were partly reopened in 1925, and up to the 1st September of that year, when killing ceased, 9,600 head of cattle were treated. The number of cattle exported by land during the year 1926–27 was 12,295, compared with 19,329 during the previous year, and that of horses about 200. The cattle industry has been retarded by the ravages of ticks and by the difficulty of travelling stock through waterless country. These difficulties are, however, gradually being overcome, the former by the introduction of the practice of "dipping," and the latter by adding to the number of wells on the various stock-routes and the creation of stock reserves. Horses thrive well, and in 1926 numbered about 43,000. Buffaloes thrive in the coastal districts, but their number has been greatly reduced by indiscriminate shooting for the sake of the hides, of which 9,309 were exported during 1926–27.

The estimated number of live stock in the Territory at various periods is given in the table hereunder :—

NORTHERN TERRITORY.—LIVE STOCK, 1910, 1915, AND 1921 TO 1926.

Year.	Horses.	Cattle.	Sheep.	Pigs.	Goats.	Camels.
1910	24,509	513,383	57,240	996	..	..
1915	19,957	483,961	57,827	500	..	..
1921	39,565	568,031	6,349	452	19,385	494
1923	44,603	843,718	4,728	647	25,647	579
1924	45,059	855,285	6,914	1,000	30,000	1,000
1925	46,380	970,342	8,030	382	21,859	452
1926	42,801	863,597	6,407	343	22,318	410

In addition there were in 1926, 1,062 donkeys and 413 mules.

3. Mining.—(i) *General.* Alluvial gold-digging in the Northern Territory commenced in 1869, and up to the end of 1880 gold to the value of £79,022 had been produced. In 1881 the gold production reached its maximum, the value for that year being £111,945. During the following years it fluctuated considerably, but as long as the alluvial deposits lasted the output was satisfactory. In the transition period from alluvial to reef mining the industry declined considerably. The production of metals other than gold has suffered from vagaries of prices, and from the disadvantages of high cost of transport and of white labour. The year 1926–27 showed a decline from the previous year in all the principal metals except tin. In the case of gold the year's production was the lowest on record, the value amounting to only £468. The average number of men engaged in the mining industry for the year 1926–27 was about 140, comprising 70 Europeans, about 55 Chinese, and the balance mostly aboriginals.

(ii) *Mineral Production.* The following table shows the total mineral production for the last five years :—

NORTHERN TERRITORY.—VALUE OF MINERAL PRODUCTION, 1922–23 TO 1926–27.

Year.	Gold.	Tin Ore.	Wolfram.	Silver-Lead Ore.	Copper Ore.	Mica.	Total Value all Minerals.
	£	£	£	£	£	£	£
1922–23	743	13,887	18	..	30	1,926	16,612
1923–24	3,270	12,855	..	..	239	2,718	19,138
1924–25	1,939	15,966	..	617	15	2,835	21,715
1925–26	593	15,852	..	447	60	2,132	19,085
1926–27	468	18,754	..	379	..	2,596	22,205

(iii) *Coal and Mineral Oil.*—Three licences for mineral oil and coal licences were granted in 1926–27, and only five such licences, representing an area of 2,220 square miles, were in existence on 30th June, 1927. No boring for oil in the Territory is at present being undertaken.

4. **Pearl, Trepang, and Other Fisheries.**—In 1884 mother-of-pearl shell was discovered in the harbour of Port Darwin. Difficulty in working, principally through heavy tides and muddy water, retarded the development of the industry for many years. During 1926–27 nine boats were operating, employing 11 Japanese divers, about a dozen Japanese tenders, and 8 aboriginals. The year's output was 63 tons, valued at £11,500. The territorial waters teem with fish, but the hope of establishing a salt and dried fish trade has not materialized. In the procuring of trepang, 5 boats and 5 persons, beside aboriginals, were engaged.

§ 6. Land Tenure.

A description of the system of land tenure in force in the Territory will be found in Chapter V.—Land Tenure and Settlement.

§ 7. Commerce and Shipping.

1. **Trade.**—No record is kept of the direction of trade between the Commonwealth States and Territories. The value of the direct oversea trade for 1901 and for each of the years 1922–23 to 1926–27 is given hereunder :—

NORTHERN TERRITORY.—VALUE OF DIRECT OVERSEA TRADE, 1901 AND 1922–23 TO 1926–27.

Items.	1901.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£	£
Imports	37,539	12,804	14,432	20,636	34,168	36,814
Exports	29,191	14,627	8,000	41,944	35,902	29,786
Total ..	66,730	27,431	22,432	62,580	70,070	66,600

The principal items of overseas export in 1926–27 were cattle, £27,832 ; pearl-shell, £700 ; hides, £43 ; trepang, £799 ; and fish, £126.

2. Shipping.—The Territory is dependent for its shipping facilities chiefly on the services of vessels trading between Sydney and Singapore. Other vessels make occasional visits, while a sixty-days' service between Fremantle and Darwin is carried out by the "Koolinda," belonging to the West Australian State Shipping Service.

NORTHERN TERRITORY.—SHIPPING, 1922-23 TO 1926-27.

Period.	Arrivals.		Departures.	
	No. of Vessels.	Tonnage.	No. of Vessels.	Tonnage.
1922-23	37	99,955	37	99,955
1923-24	35	96,099	34	96,004
1924-25	56	124,715	52	124,564
1925-26	48	118,478	49	118,665
1926-27	50	126,765	50	126,999

The foregoing figures are exclusive of particulars of coastwise shipping. During 1926-27, 14 vessels of 1,144 tons net were entered as coastwise.

§ 8. Internal Communication.

1. Railways.—Under the agreement ratified by the Act, the Commonwealth is to construct the Northern Territory portion of the transcontinental railway line (connecting Adelaide and Darwin, via Port Augusta).

The Northern line from Adelaide terminates at Oodnadatta, about 100 miles south of the southern boundary of the Territory. The only line at present in the Territory is one from Darwin to Emungalan, Katherine River, a length of 198.68 miles, of 3 ft. 6 in. gauge. The section between Emungalan and Daly Waters which was authorized by the Commonwealth Government at a cost not to exceed £1,545,000, is now under construction. A railway bridge across the Katherine River was completed in May, 1926. The completion of the remainder of the gap would permit of the development of the broad belts of pastoral and mineral country towards the centre of Australia. The Commonwealth also acquired on 1st January, 1911, the property in the line from Port Augusta to Oodnadatta (478 miles), and on 1st January, 1926, the control of the line was transferred to the Commonwealth Railways Commissioner. The extension of this line to Alice Springs has been authorized by Parliament, and a section from Oodnadatta, 21½ miles in length, is already completed.

2. Posts.—Postal communication is maintained by vessels belonging to Burns, Philp and Co., which maintain a monthly service between the Territory and the Eastern States. In addition, the vessels belonging to the State Steamship Service of Western Australia give a service once every 60 days between Fremantle and Darwin. Inland, the northern part of the Territory receives its mail via Darwin, while the southern districts are served via Adelaide.

3. Telegraphs.—The transcontinental telegraph line, covering a length of 2,230 miles, was completed on the 22nd August, 1872, at a cost of nearly half-a-million sterling. The line runs in a northerly direction from Adelaide to Darwin, whence telegraphic communication is provided with Asia and Europe, via Banjoewangie (Java), Singapore, and Madras. Between Darwin and Banjoewangie the submarine cable is duplicated.

High-power wireless stations have been constructed by the Federal Government at Wave Hill, in the Territory, and at Camooweal, just over the eastern boundary, in Queensland.

§ 9. Finance.

1. **Revenue and Expenditure, 1926–27.**—In the Commonwealth finance statements separate accounts are given for Northern Territory administration. Receipts and expenditure for 1926–27 are given below :—

REVENUE AND EXPENDITURE.—NORTHERN TERRITORY, 1926–27.

REVENUE.	£	EXPENDITURE.	£
Customs and Excise ..	7,035	Administrative Staff ..	87,056
Postal, Telegraph, and Telephone	9,848	Northern Territory Railways	57,580
Darwin-Katherine River Railway	62,202	Interest and Sinking Fund, Northern Territory Loans ..	161,886
Territorial	16,999	New Works, Artesian Bores, Roads, etc.	22,444
Land and Income Tax ..	3,577	North Australia Commission ..	12,571
Lighthouses and Light Dues ..	1,152	Miscellaneous	89,975
North Australia Commission	7,390		
Miscellaneous	13,859		
Deficiency on year's transactions	309,450		
Total	431,512	Total	431,512

2. **Northern Territory Debt.**—The items making up the total debt of the Territory as at 30th June, 1927, are as follows :—

	£	£
Debt at date of transfer to the Commonwealth, 1st January, 1911		3,931,086
Redeemed under Commonwealth Loan Acts ..	2,352,717	2,813,467
Redeemed from Consolidated Revenue ..	460,625	
Reedeemed from Sinking Fund	125	
Balance, 30th June, 1927		1,117,619

In addition, the balance of the Port Augusta–Oodnadatta Railway Loans taken over from South Australia amounted at the same date to £985,538, making a total of £2,103,157.

C. THE FEDERAL CAPITAL TERRITORY.

1. **Introductory.**—In Year Books Nos. 4 and 5, information was given in Section XXXI., in regard to the events leading to the selection of the Federal Capital Territory and the necessary legislation and the progress of operations in connexion with the establishment of the capital city. The physiography of the Territory was dealt with *in extenso*, and topographical and contour maps accompanied the letterpress, as well as reproductions of the premiated designs for the laying out of the city. Considerations of space, however, preclude the repetition of this information. On the 12th March, 1913, the official ceremony to mark the initiation of operations in connexion with the establishment of the Seat of Government was carried out. At this ceremony the selection of "Canberra" as the name of the capital city was announced.

2. **Transfer of Parliament.**—On the 24th March, 1927, the Senate and House of Representatives sitting in Melbourne, resolved that the next meeting of Parliament should be at Canberra on the 9th May, 1927. On that day the Parliament House at Canberra was officially opened by His Royal Highness Albert, Duke of York, the occasion being the 26th Anniversary of the opening of the first Parliament of the Commonwealth at Melbourne by His Royal Highness George, Duke of Cornwall and York—now His Majesty the King—on the 9th May, 1901.

The first part of the opening ceremony took place at the main entrance of Parliament House, in the presence of the Governor-General, the Governors of the States, the Prime Minister, Representatives from Great Britain and the Dominions, Members of Parliament, and other guests of the Government, as well as some thousands of citizens.

The significance of the occasion was marked by the presentation of a gold key and casket to His Royal Highness the Duke of York by the Prime Minister, who also handed duplicate keys of the House to the President of the Senate and the Speaker of the House of Representatives.

After a religious service, conducted by representatives of the Churches, the Royal Party entered Parliament House and proceeded to the King's Hall, where His Royal Highness, at the invitation of the Prime Minister, on behalf of the people of Australia, unveiled a statue of His Majesty, King George the Fifth.

The Members of the Senate and House of Representatives, and guests of the Government, then adjourned to the Senate Chamber. On the entry of His Royal Highness, accompanied by Her Royal Highness the Duchess of York, the Governor-General, and the State Governors, the Clerk of the Senate read the King's commission for the establishment of the Seat of Government at Canberra. His Royal Highness then addressed the assemblage and delivered a message from His Majesty the King.

The two Houses of the Parliament subsequently reassembled for the despatch of business, and its first meeting at the new Seat of Government, Canberra, was thus consummated.

3. **Administration.**—In Year Book No. 18, a summary was given of the development of the administration up to the taking over of the control of the Territory by the Federal Capital Commission.

The administration of the Territory entered upon a new phase when the Federal Capital Commission took over the control of its affairs at the beginning of 1925. The Commissioners have been appointed for terms of five years, four years and three years respectively, in accordance with the provisions of the *Seat of Government* (*Administration*) *Act* 1924. This Act defines the powers and functions of the Commission, which include the control and management of lands, the carrying out of works and building construction, and, generally, the municipal government of the Territory. Subject to Parliamentary and Ministerial authority, it has been empowered to raise loans for all the purposes of its administration. The *Seat of Government* (*Administration*) *Act* 1924 was amended in 1926 with the object of further defining the powers and functions of the Commission, and, since the passing of the Act the Commission's powers have been extended to include public instruction and education, the provision of police services, the conduct of hotels and similar places of accommodation, and the operation of motor omnibus services. The powers of the Commission have also been enlarged to enable it to arrange loans to persons desirous of purchasing homes under the provisions of the *Commonwealth Housing Act* 1927–1928.

The Departmental association with the administration of the Territory has therefore become limited to the general authority of the Minister for Home and Territories, and responsibility of the Department of Works and Railways to assist when required in the designing and construction of works and buildings.

It was provided in the *Seat of Government* (*Acceptance*) *Act* 1909 that all laws in force in the Territory, at the date of its acquisition by the Commonwealth, should continue in force, as far as applicable, until other provision is made.

The *Seat of Government* (*Administration*) *Act* 1910, which forms the basis for the Government of the Territory, came into force on the 1st January, 1911. It provided that certain State Acts, including those imposing taxation, were to apply no longer to the Territory, but that other State laws should, subject to any Ordinance made by the Governor-General, be the law of the Territory. This Act also provided that the inferior Courts of New South Wales should exercise, until other provision is made, the same jurisdiction as they had before.

The inferior courts of New South Wales are still being used for the administration of justice in the Territory, and many State statutes relating to the Criminal and other Law are still in force, although they have been modified in several respects in the State. A progressive review of the law is, therefore, proceeding in order that already obsolete or unsuitable State law still in force, may be replaced by modern legislation, befitting the peculiar position of the Territory under a Commission which has quasi-governmental as well as municipal functions. This review has resulted in the elimination of many State laws and the enactment of Ordinances suitable to the conditions of the Territory.

Canberra has now assumed many of the aspects of a large city, and the Commission has developed its organization under special Departments and Branches to deal with the many diverse Governmental and Municipal matters for which it is responsible. These include General Administration, Construction of Works and Buildings, Roads and Bridges, Water Supply, Sewerage and Power Services, Levying of Rates, Housing, Local Government and other Registration. Education, Control of Motor and other Traffic, Transport and City Omnibus Service, Hotels and Boarding Houses, Public Health, Regulation of Shops, Factories, and Trading Concerns, Lands Administration and allied subjects—such as Stock Control, Dairy Supervision. Meat Control, Extermination of Vegetable and Animal Pests, Agriculture, Economic Forestry, Parks and Gardens, and numerous other activities requiring the employment of all classes of workmen.

4. **Progress of Work.**—The general progress of the work of construction up to the time when the Territory was taken over by the Commission was outlined in Year Book No. 18. The Commission has continued the policy of developing the city according to the approved plan, and prior to the opening of Parliament House on 9th May, 1927, it had devoted itself primarily to the completion of the basic engineering services, viz., roads, water supply, sewerage, drainage and electric supply, and the official and residential accommodation necessary to enable the Seat of Government to be transferred, and to enable either the whole or portion of the various Departments of the Public Service to function effectively after the transfer.

Parliament House was completed prior to the opening ceremony, but the accommodation provided for the public was subsequently increased by the construction of additional galleries in the House of Representatives.

A departure from the scheme prepared by the Federal Capital Advisory Committee was approved in the case of offices for the Central Administration of Commonwealth Departments, a permanent building being decided upon instead of a group of structures of a provisional nature. As a result of an architectural competition a design has been selected for this building and the foundations have been laid. As its completion before 1930 is not practicable the staffs of the various Departments have been housed in two buildings known as Commonwealth Offices, East and West Block, and accommodation for several Branches of the Administration has been provided by the leasing of privately-owned premises on the north side of the City. An Automatic Telephone Exchange and a Central Post Office are located in part of the East Block, Commonwealth Offices, and accommodation has been reserved for the National Library in the West Block, pending the time when the erection of a monumental building for the Library will be justified. A Government Printing Office has been built and is in active operation.

A competition for Australian Architects within the Empire for a monumental structure as a National War Memorial Museum at the foot of Mt. Ainslie has been conducted. Two of the authors of premiated designs in the competition have been commissioned as Architects for the building, and a design has been adopted.

Other Federal institutions, for which provision is being made, include the National Museum of Australian Zoology and the Institution of Scientific and Industrial Research, and designs for the buildings are now being developed. A Solar Observatory has been provided at Mt. Stromlo, and the Australian School of Forestry has been established within the city area, a special feature of the building being the use of representative Australian timbers for internal work.

Official residences have been provided for the Governor-General and the Prime Minister.

A building known as the "Albert Hall" has been constructed to serve the purpose of a city hall until such time as it may be expedient to erect a "Town Hall" in the City.

The Hospital has been remodelled and extended and is now a complete general and obstetric hospital.

Visitors to Canberra have been provided for by the erection of eight hotels or large guest houses. Hotel Canberra, situated near the Governmental area, is the largest of these, with accommodation for 200 guests. Hotel Kurrajong, on the other side of the Governmental area, has a capacity for 120 guests. Hotel Acton, on the north side of the Molonglo River, will accommodate 120 guests, and Hotel Ainslie, also on the north side, has accommodation for 50 persons. The other buildings, which include Hotel Wellington and Brassey House on the south side of the river, and Beauchamp House and Gorman House on the north side of the river, each has a capacity varying between 50 and 80 persons. Most of this accommodation is being utilized for members of the Civil Service transferred from Melbourne.

Satisfactory progress has been made in the cottage construction programme, and the Commission has been able to arrange for the completion of over 700 houses.

The problem of accommodation for workmen during the period of initial construction has been met satisfactorily by the erection of portable wooden cottages (having water supply, sewerage, and electricity available) in specially selected areas, and all roughly constructed hutments and camps have as far as possible been eliminated.

The construction of main avenues and roads according to the approved plan has been continued. Many miles have been formed, and a considerable portion metalled or gravelled or improved with harder materials. Schemes for laying down permanent roads when required to carry heavy traffic are now in course of development. Many roads have been regraded, and the construction of kerbs and gutters and the preparation of plantations are being undertaken progressively as areas are developed.

Other engineering services have been extended to meet the requirements of construction and settlement, and steady progress has been made in the planting of belts of trees for shelter, and of various city parks. The formation of avenues and streets and other ornamental features has been carried out, as well as a large amount of afforestation work on the outskirts of the city.

A scheme for the planting of selected native trees in the Zoological Park has been adopted, and is now being carried out.

Water supply service reservoirs have been provided on Red Hill and Mount Russell, and mains through the city are being laid as required. The outfall sewer and treatment works have been completed, and the district sewers connected to the main sewerage scheme of the city.

Electric lighting and power services have been extended to serve the residential districts and areas where various construction works are proceeding, many miles of transmission line having been erected.

The capacity of the Power House is 2,800 kilowatts. Electrical energy is conveyed to the various factories where the manufacture of bricks, tiles, cement products, and other requirements for domestic purposes is carried on, and is in general use for street and park lighting. An agreement is being concluded with the Government of New South Wales by which Canberra will obtain hydro-electric power from Burrinjuck, which will be of considerable advantage in supplying the Capital with cheap electric light and power. Fire services have been provided, including the installation of special fire alarms for the protection of buildings and depots throughout the city. Public Abattoirs constructed to meet the requirements of a population of 10,000 are in active operation.

Provision has been made for the maintenance of roads, buildings, and other services in the Territory, and many works and buildings of a minor character have been constructed.

The proposal to dam the waters of the Molonglo River near Yarralumla for the formation of part of an ornamental lake system was referred to the Parliamentary Standing Committee on Public Works, which decided that the construction of the dam should be postponed, as it was not an immediate necessity. The matter is, however, being given further attention, owing to the necessity for regulating the flow of the river which, in winter, is liable to heavy floods.

The activities undertaken by private enterprise have been considerably augmented. During the years 1926 to 1928, 441 plans for the erection of privately-owned buildings, comprising residences, shops, offices, banks, and schools, were approved by the Commission.

The main shopping centre has been established on the north side of the City, where two blocks of buildings have been constructed by lessees and are now being used as banks, business offices and retail trading concerns. Buildings in the main shopping area and the subsidiary shopping blocks in other parts of the city must be constructed to a design already prepared for each block as a whole. This principle is adopted in order to secure dignity in design and exterior architectural expression in keeping with the location of the buildings. The difficulties experienced by local authorities, where there has been little or no co-ordinated design for shops or business premises, are therefore, to a great extent, being obviated.

5. **Lands**—(i) *In the Federal Territory Proper.* Reference has been made in Chapter V. to the general conditions of land tenure in the Territory for the Seat of Government and to the area of alienated and leased land.

As considerable portions of the Territory lands are not required in connexion with the establishment of the city, large areas have been leased under special improvement conditions in regard to the extermination of noxious weeds and the destruction of rabbits and other noxious animals. The lands are classified into three grades of agricultural and three grades of grazing land. About 167,632 acres, comprising 332 holdings, are at present held under lease for periods varying from quarterly tenure to 25 years.

The first auction sale of city leaseholds was held on 12th December, 1924, and 289 residential and 104 business sites were offered at Eastlake, Manuka Centre, Blandfordia, Red Hill, Civic Centre, and Ainslie. Of these, 146 blocks were immediately disposed of at prices averaging from £6 to £58 per foot for business sites, and from 10s. to £3 4s. per foot for residential sites. Of the remainder, 149 blocks (including all the business sites offered) were sold subsequently. A further 64 residential blocks in the original subdivisions offered were withdrawn from lease, and are being built upon by the Commission for the housing of public servants.

In view of the demand for sites, a further 18 business and 80 residential sites were offered for lease by public auction on the 29th May, 1926, and the whole of the business sites were sold at prices varying from £24 to £150 per foot. Of the residential sites offered, 21 were sold at the day of auction and a further 40 sold up to 8th April, 1927.

The lease of a site for an Amusement Hall at Manuka Centre was sold by public auction on the 10th February, 1926, at a capital value of £7,000, representing approximately £54 per foot.

A further auction sale of city leases was conducted on 9th April, 1927, when 12 business, 3 boarding house, 4 minor industrial, 1 motor service station, and 57 residential blocks were offered. With the exception of 19 residential blocks, the whole of the sites offered were sold at the following prices :—Business sites, £95 to £175 per foot; minor industrial sites, £19 to £22 per foot; boarding-house sites, £7 6s. 8d. to £9 3s. 4d. per foot; residential sites, £1 10s. to £7 per foot; the motor service station, £113 per foot. The terms of the lease require the purchasers of these sites to commence and complete the erection of approved buildings within specified periods.

A Maternity Hospital has been erected on a site made available by the Commission to meet a demand for private hospital facilities, and will be opened to the public at an early date. Sites for further maternity and general private hospitals have been allocated, and are available when development is justified.

Under the terms of the *City Area Leases Ordinance* 1924–26, each block is leased for a period of 99 years at a rental of £5 per centum per annum of the unimproved capital value as assessed by the Commission or bid at auction.

Several sites have also been leased under the *Church Lands Leases Ordinance* 1924-1927, which permits the granting of leases in perpetuity at a rental of 1 per cent. of the unimproved capital value, which is not subject to re-appraisement; also under the *Leases* (*Special Purposes*) *Ordinance* 1925–1927, which provides for leasing of city lands for non-commercial purposes.

Designs for the buildings are governed by regulations, and leases are not transferable until buildings have been erected on the land as prescribed, or where the Commission is satisfied that a building is being, or about to be, erected on the land.

(ii) *Land at Jervis Bay.* The Commonwealth has acquired from the State of New South Wales sovereign rights over the area comprising about 28 square miles of land and water at Jervis Bay for possible use as a port in connexion with the Federal Capital. The Royal Australian Naval College has been established in this area on a site known as Captain's Point, and portions of the remaining lands have been leased.

6. **Railways.**—Canberra is connected with the railway system of New South Wales by a line 4¾ miles long to Queanbeyan. This line was opened for goods traffic on the 25th May, 1914, and for passenger traffic on the 15th October, 1923, and is being worked by the New South Wales Railways Commissioners for, and on behalf of, the Commonwealth.

A public railway station has been established at Kingston, and is the terminus of the existing line.

A direct and convenient passenger service is in operation connecting Canberra with Sydney and Melbourne, and trains leave both cities for Canberra daily except Saturdays. Improved facilities for goods traffic have also been provided.

A trial survey of the Canberra–Jervis Bay line has been completed, and plans prepared to enable an estimate of the cost of the line to be obtained, but no action in regard to this project is contemplated at present.

Under the provisions of the *Seat of Government Surrender Act* 1909 of New South Wales, and the *Seat of Government* (*Acceptance*) *Act* 1909 of the Commonwealth, an agreement exists between the Commonwealth and the State of New South Wales in relation to the construction of a railway from Canberra to Yass—a distance of, approximately, 43 miles, of which about 32 miles extend through New South Wales. The State is required to construct its portion of the line as soon as the Commonwealth builds a line to the boundary of the Territory.

The permanent survey of this line has been completed, and the proposal has been the subject of an inquiry by the Commonwealth Works Committee, whose report thereon is still under consideration.

7. **Population.**—The census return of population on the 30th June, 1928, was 7,700 in the Federal Capital Territory and 437 in Jervis Bay Territory, or a total of 8,137 persons.

8. **Live Stock**—The live stock, according to the latest return, comprises :—

Horses	2,052
Cattle	6,077
Sheep	225,736

9 **Educational Facilities.**—Arrangements have been made with the New South Wales Education Department to continue for the time being the administration of education in the Territory, the expenditure involved being refunded annually by the Commission to the State. There are fifteen schools in the Territory, including one at

Jervis Bay. The largest of these is Telopea Park School, which is situated on the south side of the city area. Telopea Park School has accommodation for 1,000 scholars, and its curriculum provides a standard of education comparable in range of subjects with that provided at the best of the Government High Schools in New South Wales, thus permitting scholars to qualify for entrance to the Universities.

The School also provides for Junior Technical, Commercial, and Trades School Branches, as well as Evening Continuation Classes.

The Trades School, which is excellently equipped, supplies the necessary training for apprentices and to journeymen who are desirous of improving their respective trade qualifications.

Provision at the School has also been made for Domestic Science and Dressmaking Sections.

An Infants' School, to accommodate 450 children, has been erected on the north side of the city, where for the present scholars of the primary standard on the north side of the river are being catered for. Apart from three other smaller schools in the temporary section of the city settlement, the balance are small rural schools serving the needs of leaseholders settled in the Territory.

A report by a committee of experts upon a University scheme was considered by the Commission and submitted to the Government. The Government agreed that there should be a University at Canberra, but has not yet authorized any expenditure in connexion therewith.

There are at present two private schools—St. Gabriel's Church of England Grammar School for girls, and St. Christopher's Convent School—both of which have facilities for primary and secondary pupils.

The council of the Monaro Grammar School Ltd., which is a secondary school for boys, has decided to remove the school to the Federal Capital, and a lease, which provides that commencement shall be made with the school buildings within a period of six months, has been granted on the southern side of the city area.

It is anticipated that other private educational institutions will be established in the near future.

10. Social Service.—During 1925 the Commission inaugurated a social service movement aiming at co-operation in social activities between the Commission and the citizens of Canberra. This movement was responsible for the stimulation of co-operative effort among the residents in many spheres of activity essential for the welfare of the people, e.g., indoor and outdoor recreation, libraries, children's playgrounds, women's and children's welfare.

After being directly fostered by the Commission for three years during the period of settlement, the Social Service movement has now been taken over by the citizens, subject to some assistance from the Commission.

One of the aims of this movement is the provision of recreational and other facilities by voluntary labour. A hall accommodating about 600 people has been built at The Causeway, and other halls have been similarly created, the Commission supplying the materials. Children's playgrounds have also been made in nine centres, and others will be established in settled suburbs of the city area. The movement is also responsible for providing tennis courts and other sports grounds.

The Mothercraft Society, affiliated to the Association, was responsible for the establishment at Canberra of a Baby Health Centre. The Commission assisted this movement, and the Mothercraft Society has suitable head-quarters and the services of a trained nurse. A club for women workers has been established in Canberra, known as "Lady Hopetoun Club," which provides residential accommodation as well as opportunities for social intercourse.

A Community Library has been established in which nearly 3,000 books are available for members.

A Parents' and Citizens' Association, which is a medium of expression of public opinion on the subject of education, has been actively working for some years, and takes a lively interest in measures for the recreation and entertainment of school children.

Other societies which have been formed under the ægis of the Association are the Arts and Literary Society and the Musical Society.

11. Expenditure.—(i) *General.* The capital expenditure on the Seat of Government during the period 1901 to 1911 and for each year thereafter up to the 30th June, 1924, was published in Year Book No. 18.

Details of the expenditure for the period 1924–25 were published in Year Book No. 19.

Expenditure for the period 1925–26 amounted to £1,476,207, including £1,467,517 on construction and £8,690 on acquisition of land.

Expenditure for the period 1926–27 amounted to £1,911,693, including £1,887,571 on construction and £24,122 on acquisition of land.

(ii) *Expenditure* 1926–27 *and* 1927–28. Details of expenditure for the years 1926–27 and 1927–28 are given hereunder :—

FEDERAL CAPITAL TERRITORY.—EXPENDITURE, 1926–27 AND 1927–28.

Particulars.	Amount.	
	1926–27.	1927–28.
	£	£
Buildings—		
Parliament House	169,731	59,627
Permanent Administrative Offices	1,506	49,939
Secretariat Buildings	93,540	17,546
Forestry School	20,896	4,974
Government House, Yarralumla	36,749	5,181
Printing Office (including Pneumatic Tubes)	22,331	3,252
Hotels, Boarding Houses, etc.	186,059	22,702
Prime Minister's Residence	19,933	1,607
Commission Offices	2,137	2,940
Primary Schools	15,470	20,885
Abattoirs	1,033	1
Canberra Hospital	22,821	9,463
Cottages	373,339	276,419
Temporary Accommodation for Workmen	36,087	14,964
Store Building	8,030	4,937
Transport Garages	3,567	6,779
Assembly Hall	43	24,007
Solar Observatory	36,981	21,772
Physical Testing Laboratory and Equipment	2,420	413
	1,052,673	547,408
Water Supply and Sewerage—		
Water Supply	82,472	27,942
Sewerage	143,996	27,690
Stormwater Drainage	41,328	40,119
Intercepting Channels	..	9,652
	267,796	105,403
Roads and Bridges	233,474	266,338

FEDERAL CAPITAL TERRITORY.—EXPENDITURE, 1926–27 AND 1927–28—*continued.*

Particulars.	Amount.	
	1926–27.	1927–28.
	£	£
Electric Light and Power (Power House and Mains) ..	40,504	54,897
Recreation Grounds	340	784
City Beautification, Parks, etc.	18,856	21,605
Garden Formation (Parliamentary Area)	17,822	1,246
Molonglo River Improvements	1,196	..
Farmhouses—Additions and Improvements	529	..
Interest on Loans	121,156	159,016
Holiday Pay—9th to 10th May, 1927	6,077	..
Plant and Equipment (including £24,625 on Brickworks) ..	75,495	38,498
War Memorial Competition	2,040	291
Forestry	4,855	5,835
Commissariat Equipment	18,360	2,260
Miscellaneous	22,391	23,959
	329,621	308,391
Social Service	4,007	3,241
New Fencing	2,249	3,268
Land Acquisition	21,873	13,943
	24,122	17,211
Total	1,911,693	1,247,992

12. **Revenue.**—The revenue for the Federal Capital Territory from 1st July, 1924, to 30th June, 1928, was as follows:—

For the year ended 30th June, 1925 ..	£90,476
For the year ended 30th June, 1926 ..	154,395
For the year ended 30th June, 1927 ..	388,987
For the year ended 30th June, 1928 ..	569,162
	£1,203,020

D. NORFOLK ISLAND.

1. **Area, Location, etc.**—Norfolk Island, discovered by Captain Cook in 1774, is situated in latitude 29° 3′ 45″ south, longitude 167° 58′ 6″ east. Its total area is 8,528 acres, the island being about 5 miles long and 3 miles wide. From Sydney it is distant 930 miles, and from New Zealand 400 miles. The coast line is 20 miles, and its form that of an irregular ellipse. Except on the south-west, inaccessible cliffs rise from the water's edge. The climate is equable, the temperature ranging between 56° and 82°, with a mean of 68°. The average annual rainfall is 55 inches. It has been said that the salubrious climate, coupled with the beauty of its land and sea scapes, should combine to render Norfolk Island " the Madeira of the Pacific." At present the island is visited annually by a fair number of tourists, but with improved shipping facilities the traffic would considerably increase.

2. **Settlement.**—The first colonization, in 1788, was by Lieutenant King, who in H.M.S. *Sirius* established a small penal station as a branch settlement of that at Port Jackson. The settlement was abandoned in 1813, and for 13 years thereafter its chief use was as a whaling station and place of call for British warships.

From 1826 to 1855 it was again made a penal station. In 1844 it was annexed to Van Diemen's Land (Tasmania).

The descendants of the *Bounty* mutineers, having become too numerous to subsist on Pitcairn Island, were removed thence to Norfolk Island in 1856. The new community numbered 193—94 males and 99 females—and were the descendants of British sailors and Tahitian women.

3. **Administration.**—In 1856 the island was created a distinct and separate settlement under the jurisdiction of New South Wales. In 1896 it was made a dependency under the Governor of that Colony. In 1913, however, the Federal Parliament provided for the taking over of the island as a territory of the Commonwealth, and since the 1st July, 1914, the island has been administered by the Department of Home and Territories, through an Administrator and Chief Magistrate. There is an Advisory Council, consisting of twelve members, presided over by the Administrator. Six of the members are elected by the residents, and six are nominated by the Administrator. The powers and duties of the Council were laid down in Ordinance No. 2 of 1925. According to this Ordinance the Executive Council has the oversight of public roads and reserves, etc. It may transmit to the Administrator for submission to the Minister proposals for new Ordinances or for the repeal or amendment of existing ones, and it may make by-laws in connexion with local matters.

4. **Population.**—The population on 30th June, 1927, was 436 males and 417 females, a total of 853. In the year 1926–27, 11 births, 10 deaths, and 4 marriages were recorded.

5. **Live Stock.**—The latest returns of live stock show that there are on the island 1,827 cattle, 504 horses, 85 sheep, and 183 pigs. In addition, there are 5,966 head of poultry.

6. **Production, Trade, etc.**—The soil throughout is rich, and is specially suitable for the cultivation of citrus fruits, bananas, and (in parts) coffee. Various other sub-tropical fruits thrive well. During 1926–27, the production of oranges and Lisbon lemons was 3,200 cases; bananas, 9,100 cases; passion fruit, 1,600 bushels; coffee, 1,800 lb.; and pineapples, 200 dozen. There are many thousands of lemon trees and guavas growing wild throughout the island.

Large numbers of whales pass the island throughout the season but whaling has now practically ceased. The preserved fish industry also offers a field for commercial energy; such fish as trevalla, kingfish, snapper, and many others, are plentiful. Banana-growing, for which the island is well suited, is making great progress, and the output of bananas more than doubled during the year under review. The "all-red" cable from Great Britain via Vancouver, Fanning Island, and Fiji, bifurcates at Norfolk Island, one line connecting with New Zealand, the other with Brisbane. A monthly steamship service between Norfolk Island and Sydney is carried on by Burns, Philp and Co., while the New Zealand Government steamer *Hinemoa* has established a regular service with Auckland.

Imports and exports for the last five years are given hereunder :—

IMPORTS AND EXPORTS, 1922–23 TO 1926–27.

Heading.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
Imports..	15,461	22,023	17,190	18,882	27,869
Exports..	3,754	3,170	3,961	6,156	13,578
Total	19,215	25,193	21,151	25,038	41,447

7. **Social Condition.**—Education is free and compulsory up to the age of fifteen years. The school is under the New South Wales Department of Public Instruction, with standards corresponding to the State public schools, but the salaries and allowances of the teachers are paid by the Norfolk Island Administration. A Parents' and Citizens' Association has been formed in connexion with the school, and a school-paper is printed. The number of scholars enrolled on the 30th June, 1926, was 137.

The Magistrates' Court has criminal jurisdiction in all crimes except capital offences, civil jurisdiction in all matters, and authority to grant probate and letters of administration.

8. **Finances.**—The receipts and expenditure for the year 1926–27 were as follows :—

NORFOLK ISLAND.—RECEIPTS AND EXPENDITURE, 1926-27.

Heading.	Receipts.	Heading.	Expenditure.
	£		£
Brought forward ..	3,217	Salaries	4,133
Commonwealth Subsidy ..	3,500	Repairs of Government Buildings	644
Tariff Collections in Sydney ..	982	Miscellaneous	1,117
Interest on Funded Stock ..	114	Purchase of Liquor ..	516
Postal Department ..	162	Balance carried forward ..	3,124
Fees, etc.	569		
Sale of Liquor	844		
Miscellaneous	146		
Total	9,534	Total	9,534

Traffic in intoxicating liquor is prohibited, and the item "Sale of liquor" in the table refers to liquor dispensed under medical prescription.

E. NEW GUINEA.

1. THE ISLAND OF NEW GUINEA.

1. **Geographical Situation of New Guinea.**—New Guinea lies to the north of Australia, between 0° 25′ and 10° 40′ S. latitude, and between 130° 50′ and 150° 35′ E. longitude. Its estimated area exceeds 300,000 square miles, the greatest length being 1,490 miles, and the greatest breadth 430 miles.

2. **Discovery.**—The island was probably sighted by Abreus in 1511. The first visit by Europeans was apparently either that by the Portuguese Don Jorge de Menesis on his way from Goa to Ternate in 1526, or that by the Spaniard Alvaro de Saavedra in 1528. In 1606 Torres, having parted company with De Quiros at the New Hebrides, sailed, on his way to the Philippines, through the strait which separates the island from Australia, and which now bears his name.

3. **Colonization.**—In 1793, New Guinea was annexed by two commanders in the East India Company's service. Since that date the Dutch have made extensive surveys of the western portion, and the British and Germans have occupied and colonized the eastern. In September, 1914, German New Guinea was seized and occupied by Great Britain by means of a force raised and dispatched by the Australian Government.

4. **Partition.**—The three colonizing powers agreed to the partition of New Guinea, each having suzerainty over islands adjoining its own territory. The whole of the portion west of the 141st degree of latitude, comprising about 150,000 square miles, or nearly half the island, belongs to the Dutch. The eastern half was divided in almost equal portions between Great Britain and Germany, the area possessed by each (with adjacent islands), being about 90,000 square miles. An Anglo-German boundary commission appointed for the purpose of defining the boundary between the territories of the two nations, started operations on 26th December, 1908, and completed the field-work on 27th October, 1909. The total length of boundary delimited was 66½ miles. The Dutch colony forms part of the residency of Ternate in the Moluccas, and has not been extensively developed. The German protectorate, where considerable commercial development had taken place, included the northern part of the eastern half of the mainland, formerly known as Kaiser Wilhelm's Land, and the islands of the Bismarck Archipelago, as well as the two northernmost islands of the Solomon Group. The south-eastern portion of New Guinea, nearest Australia is a dependency of the Commonwealth of Australia. The German Pacific protectorate was terminated in 1914, and is now held under a mandate by the Commonwealth of Australia.

2. PAPUA.

§ 1. General Description of Papua.

1. **Early Administration.**—Particulars of the early administration of Papua were given in Official Year Book No. 19, p. 576, but owing to limitations of space have not been included herein.

2. **Administration by Commonwealth of Australia.**—The Territory was placed under the authority of the Commonwealth on 1st September, 1906, by proclamation issued in pursuance of Letters Patent of the 18th March, 1902, and was accepted by the Commonwealth by the Papua Act 1905, which came into force by virtue of the proclamation aforesaid. The transfer was made under the authority of section 122 of the Constitution (see p. 33 hereinbefore). The Territory is now under the administration of the Commonwealth, but not included within it, and is divided into eleven magisterial districts.

3. **Area, etc.**—Papua lies wholly within the tropics. The northernmost point touches 5° S. latitude; its southernmost portion, comprising Sudest and Rossel Islands, lies between 11° S. and 12° S. latitude. It is separated from Australia by Torres Strait. The length of Papua from east to west is upwards of 800 miles; towards either end the breadth from north to south is about 200 miles, but about the centre it is considerably narrower. The Territory comprises also the islands of the Trobriand, Woodlark, D'Entrecasteaux and Louisiade groups. The length of coast-line is estimated at 3,664 miles—1,728 on the mainland, and 1,936 on the islands. The total area is about 90,540 square miles, of which 87,786 are on the mainland, and 2,754 on the islands. A reference to the physical characteristics of the Territory appears in previous issues of the Official Year Book (see No. 18, p. 633).

§ 2. Population.

The white population of Papua on 4th April, 1921, was 1,343, made up of 961 males and 382 females. Included in these figures were 79 persons, who were passengers and crew of the s.s. *Marsina*, which was at Samarai at the taking of the Census. The following table gives the white population in each of the last five years:—

WHITE POPULATION OF PAPUA, 1923 TO 1927.

YEAR ENDED 30TH JUNE.

1923.	1924.	1925.	1926.	1927.
1,086	1,276	1,371	1,452	1,366

The chief occupations of the non-indigenous population at the taking of the Census were:—Government officials and employees, 132; commercial pursuits, 150; shipping, 124; tropical agriculture, 266; missionary work, 144; mining, 159.

It is not possible to give exact data regarding the number of natives, because a large area of the interior is not yet under Government control. The official estimate is 275,000. Such censuses of the native population as have been taken during recent years point to a slight increase. The coloured population, other than Papuans, numbered on 4th April, 1921, 577, and included many mission teachers from Samoa, Fiji, and other Pacific Islands. On the same date, half-castes, with one of the parents a European, totalled 158. An Immigration Restriction Ordinance prohibits the immigration of persons who fail to pass the dictation test, or who are of bad character, or likely to become a charge upon the public. Exemptions may, however, be granted by the Lieutenant-Governor to persons of special skill required for employment as overseers or foremen.

§ 3. Native Labour, Taxation, Health, etc.

1. **Native Labour.**—(i) *General.* The rights of both employer and labourer are conserved by the Native Labour Ordinances. Service on the part of the native is voluntary, and he must be justly treated, and properly housed and fed. Employers may recruit personally, or obtain their natives through a licensed recruiter. Contracts of service must be in writing entered into before a magistrate or other qualified officer, and the natives must be returned to their homes on completion of engagement. During the period of service the recruiter or employer is responsible for the native's welfare. Refusal to work after an engagement, or desertion from service, renders the labourer liable to imprisonment. On the other hand, a magistrate may terminate an engagement where unjust or harsh treatment by the employer is proved. The term of indenture must not exceed three years, and in the case of miners and carriers the limit is eighteen months, but re-engagements may be made. The magistrate must satisfy himself that the remuneration is fair, that the native is willing to undertake the service, and that there is no probability of unfair treatment or detention. Wages must be paid in the presence of an officer. A medicine-chest stocked with necessary drugs and first-aid instruments must be kept by all employers. The employment of free labour in place of contract labour is being encouraged by the Government. The table hereunder gives particulars regarding native labour during the last five years :—

PAPUA.—NATIVE LABOUR, 1923 TO 1927.

Year ended 30th June—	Natives Engaged.	Natives Paid Off.		
		Number.	Wages Paid.	Average Annual Wage per Native.
			£ s. d.	£ s. d.
1923	5,473	4,893	47,993 6 11	9 16 2
1924	6,206	4,959	42,776 7 8	8 12 6
1925	6,817	4,661	46,019 14 5	9 17 5
1926	6,716	6,317	63,082 17 5	9 19 8
1927	5,566	6,666	62,086 12 8	9 6 4

In addition 1,277 natives were employed in the Territory in 1926 who were not under a contract of service.

Hitherto the supply of native labour has been sufficient to meet the demand, while last year the labour offered exceeded requirements.

Natives in charge of vessels owned by Europeans, drivers of launches and motor lorries, carpenters and other skilled labourers receive from £3 to £10 per month.

2. **Native Taxes.**—Under the Native Taxes Ordinance, passed in 1918, a tax not exceeding £1 may be imposed on natives, excepting native constables, mission teachers, natives unfit for work, and those who have not less than four living children. The proceeds of the tax must be expended on education, or devoted to purposes directly benefiting the natives, as may be prescribed.

The taxes collected in 1926–27 amounted to £16,085 net, of which £7,739 was transferred to the Native Education Fund, and £7,012 to the Native Benefit Fund. The Native Education Fund during the year 1926–27 disbursed to primary and technical education £4,280 and to agricultural education £2,888, leaving a credit balance of £28,651. From the Benefit Fund the expenditure included :—Anthropology £804, health £7,207, village improvements £272, family bonuses £1,332.

3. **Care of Half-caste Children.**—An Ordinance was passed on the 11th September, 1922, to provide for the care and maintenance of neglected half-caste children. The Ordinance provides that a sum of £26 per annum shall be paid to the Commissioner for Native Affairs by the adjudged father of the child until the child, if a boy, shall reach the age of 16 years, or, if a girl, 18 years.

4. **Health.**—During the year natives to the number of 1,803 were admitted to the native hospitals in Port Moresby and Samarai. The chief complaints treated were yaws, ulcers, lung affections, and gonorrhœa. Three travelling medical officers and four European medical assistants were employed, and native medical assistants are being trained by

them. Two qualified doctors are now employed by mission societies, and these have assisted greatly in improving the health of the natives. The work done consisted chiefly of dealing with cases of yaws by means of the latest arsenical drugs, the distribution of hookworm treatment, and the control of venereal diseases. Out of an average of 8,315 native labourers employed by Europeans, 131 died, as compared with 118 during the previous year.

§ 4. Land Tenure.

1. Method of Obtaining Land.—(i) *The Land Laws.* The broad principles upon which the land laws of Papua are based are :—(*a*) No land can be alienated in fee-simple ; (*b*) the rental of the land leased is assessed on the unimproved value and is subject to reassessment at fixed periods.

A detailed account of the method of obtaining land was given in Official Year Book No. 6, pp. 1083–4.

(ii) *The Leasehold System.* With a view of attracting pioneer settlers, an ordinance was passed in 1906 under which leases were granted on very liberal terms. No rent was payable for the first ten years, the heavy expense of survey was borne by the Government, and no charge was made for the preparation and registration of the leases. Under this system, the area under lease increased in four years from 2,089 acres to 363,425 acres ; about 140 plantations were started, and nearly 1,000 acres planted during that period. Since 1st June, 1910, however, no leases exceeding 5,000 acres in extent have been granted, and rent at the rate of 3d. per acre must be paid from the commencement of all leases exceeding 1,000 acres in area.

2. Holdings.—(i) *General.* On the 30th June, 1927, the lands of the Territory were held as follows :—

PAPUA.—HOLDINGS, 1927.

Description.	Area.
	Acres.
Land held by the natives	56,928,475
Crown land	824,084
Freehold land	23,085
Leasehold land	169,956
Area of Territory ..	57,945,600

Private sales of land in the Territory have now practically ceased. The Government buys from the natives, and then leases to planters, who are forbidden to have direct dealings in land with Papuans.

(ii) *Leaseholds.* The position as regards leasehold tenures may be seen from the following table :—

PAPUA.—LEASEHOLDS, 1922–23 TO 1926–27.

Year ended 30th June ..	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
Land held under lease .. acres (as recorded)	193,494	190,124	188,348	186,966	169,956

Of the total area of 169,956 acres shown above, agricultural leases accounted for 158,938, pastoral leases for 9,450, special leases for 796, mission leases for 463, and other leases for 309 acres.

The area of land acquired by the Crown in 1926–27 was 721 acres.

The total area surveyed in the Territory is 21,693 acres of freehold, and 259,150 acres of leasehold.

§ 5. Production.

1. **General.**—The products of the Territory are obtained from its agricultural, forestal, fishing, mining, and manufacturing industries. For many years gold-mining yielded the largest returns, but the production has dwindled considerably owing to the exhaustion of the alluvial deposits. There is a possibility of obtaining petroleum in marketable quantities. Amongst plantation products, copra occupies the foremost place, but little planting has been done in recent years. Portions of the Territory appear well suited for cotton cultivation.

2. **Agriculture.**—(i) *Soil and Rainfall.* The physical features of Papua are favourable to agriculture. Rich soils at varying elevations, and heavy and evenly-distributed rainfall favour the cultivation of a variety of tropical products including sugar cane, coconuts, sago palm, bread fruit, dyewoods, spices, ginger, nutmegs, bananas, and other fruits. There are large areas of rich alluvial and volcanic soils along the coast, and fertile land is found at elevations up to 6,000 feet. Heavy rainfalls occur, except over a belt of country which runs back from the coast to the hills, and which has its dry season from May to November. This "dry" area is admirably suited for the production of tobacco, fibres, cotton, etc. There are 21 meteorological stations throughout the Territory, and an economic museum and agricultural library have been established.

(ii) *Plantations.* On 31st December, 1926, there were 303 plantations. Agricultural settlement has been mostly in the Central and Eastern Divisions, and the area planted was 62,725 acres, as against 62,981 in 1925. The principal plantation crops are coconuts, rubber, and sisal hemp. There is also some cultivation of bowstring hemp, kapok, coffee, tobacco, vanilla, cocoa, tapioca, cinnamon, tea, rice, and maize. The natives are compelled by an ordinance to plant coconuts for food supply. In addition to the coconuts in these plantations, many more are planted over small and widely scattered areas by the older natives in accordance with custom. A recently promulgated ordinance, the *Native Plantations Ordinance*, is an attempt at establishing plantations in which the Government and the natives are joint partners. The following table shows the areas under the different cultures at the end of December, 1926 :—

PAPUA.—AREA OF PLANTATIONS, 1926.

Description.	Area.
	Acres.
Coconuts	50,218
Rubber	7,981
Hemp	3,560
Coffee	22
Rice	13
Cotton	300
Other cultures (including fruit trees)	631
Total	62,725

The quantities of copra and rubber exported during the year ended 30th June, 1927, were :—Copra, 9,542 tons ; rubber, 761 tons. There has been a slight decrease in the acreage under coconuts, and an increase in the acreage under rubber. The acreage under cotton shows a considerable decline.

(iii) *Government Plantations.* There are two Government plantations, the Orangerie Bay coconut plantation, and the Kemp Welch rubber plantation. The profits from these plantations last year were £7,543, as against £8,780 in 1925–26.

3. Forestry.—According to the Commonwealth Forestry Adviser the principal softwood timber is known as "ilimo," while among satisfactory timbers of the lowlands are "nara," "medobi," and "melila." There is a large number of woods, varying from the softest to the hardest, including beautiful cabinet woods, but research is necessary to determine their usefulness. The development of a coniferous belt at the higher altitudes offers great possibilities. It is believed that teak and sandalwood are well suited for cultivation.

4. Live Stock.—On 31st December, 1926, the live stock in the Territory consisted of 718 horses, 5,975 head of cattle, 168 mules, 14 donkeys, 3,677 goats, and 645 pigs. A Government stud-farm has been established for the breeding of horses. The introduction of rabbits, foxes, hares, and monkeys is prohibited.

5. Fisheries.—Pearl-shell fishing occupies an important place in the industries of Papua. A considerable number of luggers is licensed, but the returns are mostly credited to Queensland, whose boundary approaches to within a few miles of the Papuan coast. The species of tortoise which supplies the commercial tortoise-shell is also a native of the Territory. Bêche-de-mer and trochus are found along the shores and reefs, and form valuable articles of export.

6. Mining.—(i) *Variety of Minerals.* Minerals have been found over a wide range of country. Those discovered so far are—gold, copper, tin, lead, zinc, cinnabar, iron, osmiridium, gypsum, manganese, sulphur, graphite, chromite, brown coal, lignite, and petroleum. The existence of petroleum has been traced at scattered intervals over a large area. There are nine mineral oil and coal licences in existence, embracing an area of approximately 7,922 square miles. The Anglo-Persian Oil Company for the Commonwealth and the Vogel Petroleum Coy. Ltd., near Cape Vogel, have been working almost continuously, while the Oriomo Oil Limited has now three boring plants working. The others have done practically no work during the year under review. Several bores have been put down, one to a depth of 2,700 feet; but so far oil in payable quantity has not been struck.

Of precious stones, only the topaz and beryl have been obtained. Large beds of apparently good coal also exist.

(ii) *Gold.* In 1888 the first gold was discovered, and the search gradually spread over every division, finds being reported wherever the explorers went. The yield in 1923–24 was the lowest recorded since 1895, but it has improved considerably during the last two years.

The total quantity, in fine ounces, and the value as returned of the gold yield for the last five years are given below :—

PAPUA.—GOLD YIELD, 1922–23 TO 1926–27.

1922–23.		1923–24.		1924–25.		1925–26.		1926–27.	
Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
fine ozs.	£	fine ozs.	£	fine ozs.	£	fine ozs.	£	fine ozs.	£
5,084	22,494	1,441	6,704	4,153	17,642	6,388	27,135	6,150	26,124

Most of the rivers, with the exception of those flowing into the Gulf of Papua, have been declared open to gold-dredging, and good yields have been obtained. The total value of gold won to 30th June, 1927, was £1,733,336.

(iii) *Copper.* Owing to the very low prices ruling for copper in the world's market, the copper mines in Papua have suspended operations. During the year 1926–27 the shipments to Australia amounted to about 531 tons of copper matte, and 51 tons of blister copper of a gross total value of £35,799. The total value of the copper exported to the 30th June, 1927, was £366,197.

(iv) *Osmiridium.* The existence of osmiridium had been known for several years, but for some time no serious attempt was made to collect it, the alluvial gold miner often picking out the larger slugs of the metal from his gold parcel and throwing them away. The production in 1926–27 amounted to 60 ozs., valued at £1,200.

(v) *Other Minerals.* Some good samples of galena (sulphide of lead) have been obtained, while cinnabar (sulphide of mercury), graphite (or plumbago), zinc-blende, native sulphur, and other minerals are known to exist. In 1924 a deposit of lignite was discovered on Smoky Creek, a tributary of the Era River.

A mineral laboratory and museum have been fitted up, and are available to prospectors and others interested.

7. **Water Power.**—Most of the rivers in Papua carry a large volume of water from a great height over a relatively short distance, thereby offering opportunities for the installation of hydro-electric power plants. It is estimated that there are at least 10,000,000 h.p. available for this purpose.

§ 6. Finance, Trade, Postal and Shipping.

1. **Finance.**—Owing mainly to the closing down of the New Guinea Copper Mines at Bootless Inlet towards the end of 1926, but partly to other causes, the revenue for 1926–27 decreased, as compared with 1925–26, by £3,987. The principal sources of revenue were as follows :—Commonwealth Grant, £50,000 ; Customs and Excise, £57,456 ; Government Plantations, £17,339 ; Fees of Office, £6,574 ; Land Revenue, £4,141 ; Post Office, £3,619 ; Port and Wharfage Dues, £2,798 ; and Miscellaneous, £14,377.

Compared with 1925–26 every department was faced with higher expenditure, due principally to the reclassification of the Service. Apart from this, Public Works Department undertook a very heavy building programme which resulted in an expenditure of £43,292, exceeding by £13,697 that of previous year.

Returns of revenue and expenditure for the last five years, exclusive of Commonwealth grants, are given hereunder :—

PAPUA.—LOCAL REVENUE AND EXPENDITURE, 1922–23 TO 1926–27.

Item.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
Revenue	63,124	77,750	82,909	116,367	111,508
Expenditure	123,691	131,640	143,831	157,203	167,727

2. **Trade.**—The value of imports and exports for the last five years is shown in the table below :—

PAPUA.—VALUE OF IMPORTS AND EXPORTS, 1922–23 TO 1926–27.

Particulars.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
Imports..	315,423	354,965	459.080	470,774	455,904
Exports..	179,452	239,408	367,629	649,373	454,462
Total Trade ..	494,875	594,373	826,709	1,120,147	910,366

The great drop in the value of exports is due to a fall in prices for copra and rubber, and to the closing down of the copper mines. In the case of copper the export value dropped from £155,305 in 1925–26 to £35,799 in 1926–27.

As in all new countries, the imports consist chiefly of articles necessary for the primal needs of the community, such as agricultural products and groceries, drapery, machinery, tobacco, oils, paints, beverages, wood, wicker and cane, drugs, etc. The chief items of export during the last five years are as follows :—

PAPUA.—PRINCIPAL EXPORTS, 1922–23 TO 1926–27.

Article.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
Bêche-de-Mer	13,453	10,441	10,351	10,205	16,193
Copper Ore	14	120	41,674	155,305	35,799
Copra	112,481	136,659	172,905	204,097	186,837
Cotton	..	550	3,761	4,866	824
Gold	22,494	6,792	14,980	22,320	29,115
Hemp	..	1,125	13,141	7,695	33
Osmiridium	2,790	3,553	3,630	1,500	430
Pearls	9,797	16,600	19,300	13,249	8,968
Pearl Shell and Trochus Shell ..	1,868	6,120	8,773	14,317	7,576
Rubber	5,907	33,334	68,507	194,849	156,274

3. **Shipping.**—The following table shows the number and tonnage of oversea vessels entered and cleared at ports during the years 1922–23 to 1926–27. All the vessels except two were of British nationality.

PAPUA.—OVERSEA SHIPPING, 1922–23 TO 1926–27.

Year.	Vessels.	Tonnage.
1922–23	143	77,676
1923–24	99	68,170
1924–25	120	78,613
1925–26	115	129,553
1926–27	143	226,948

Throughout, the figures are exclusive of ships of war and Government vessels.

§ 7. Progress of Papua.

1. **Statistical Summary.**—As already stated (§ 2, *supra*) the Territory was placed under the Commonwealth control on 1st September, 1906. The following table indicates the progress that has been made since that date :—

PAPUA.—STATISTICAL SUMMARY, 1907 TO 1927.

Items.	Year ended 30th June—	
	1907.	1927.
White population	690	1,366
Native labourers employed	2,000	8,315
Number of white civil servants	65	137
Armed constabulary	185	284
Village constables	401	1,077
Territorial revenue	£21,813	£111,508
Territorial expenditure	£45,335	£167,727
Value of imports	£87,776	£455,904
Value of exports	£63,756	£454,462
Area under lease .. .. acres	70,512	169,956
Area of plantations .. .. acres	1,467	62,725
Meteorological stations established	3	21
Gold yield .. .. fine ounces	12,439	6,150
Live stock in Territory—		
Horses	173	718
Cattle	648	5,975
Mules	40	168

3. THE TERRITORY OF NEW GUINEA.

§ 1. General Description.*

1. **Area and Geographical Position.**—The present Territory of New Guinea comprises that portion of the German New Guinea Protectorate which lay south of the equator (excepting only the island of Nauru, see F hereinafter), and which was known in German times as the "Old Protectorate." The principal islands (with their German names if these differ from those now in use) and their approximate areas are as follows :—

AREA OF TERRITORY OF NEW GUINEA.†

Particulars.	Approximate Area.
	Square miles.
North-East New Guinea (Kaiser Wilhelm's Land)	70,000
Bismarck Archipelago—	
New Britain (Neu Pommern)	13,000
New Ireland (Neu Mecklenburg)	3,000
Lavongai (New Hanover or Neu Hannover)	600
Admiralty Islands and North-Western Islands	1,000
Solomon Islands—	
Bougainville	3,200
Buka	200
Total	91,000

2. **North-East New Guinea.**—(i) *General.* North-East New Guinea (Kaiser Wilhelm's Land) is the north-eastern part of the island of New Guinea. Much of the interior, which is rugged and mountainous, with heights reaching to over 13,000 feet, is still unexplored. The mountain ranges approach the coast, leaving comparatively little flat land near sea level, but this narrow strip is very fertile. All trade and communications are by sea along the coast, and the interior is left almost wholly to the native population.

(ii) *Coast-line.* The coast-line, which is over 900 miles long, is in parts fringed with coral reefs, and there are many small, lofty islands along its course. Except for Huon Gulf in the little developed east of the country, there are no deep inlets. Langemak Bay has commodious anchorage in deep water, and Finsch Harbour has landlocked anchorage for small vessels. Astrolabe Bay has two or three sheltered harbours, including Melanua, Madang (Friedrich Wilhelm Harbour) and Sek, which are the best on the coast. There are many other anchorages suitable, in certain winds, for schooners and small steamers.

(iii) *Rivers.* There are many rivers, of which the most important are the Sepik (Kaiserin Augusta) and the Ramu (Ottilien). The Sepik rises near the junction of the boundaries of Dutch New Guinea and Papua, and flowing easterly reaches the coast in latitude 4° S. It is navigable for 60 nautical miles by large ocean steamers, and for 300 nautical miles by steamers drawing from 10 to 13 feet. In 1914, a vessel of 50 tons ascended the river for 450 miles ; it was then in flood and 7 fathoms deep at this distance, while at low water the depth was said to be 4 fathoms.

The Ramu rises in about 6° S. latitude and, flowing northwards, enters the sea near the mouth of the Sepik. It has been navigated, though with great difficulty, by flat-bottomed steamers for nearly 200 miles from its mouth.

3. **Bismarck Archipelago and Solomon Islands.**—(i) *General.* The islands of the Bismarck Archipelago and the Solomons are generally mountainous, with level ground near the coasts alone. The only low-lying islands are some in the Duke of York and Admiralty Group. The islands of Bougainville and Buka (Solomons) are equally rugged ; Bougainville contains mountains reaching 10,000 feet. The soil is usually fertile, except on the low coral islands, where fresh water is scarce.

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* A map of the Territory was published in Official Year Book No. 16, p. 665.
† In regard to geographical position, see Year Book No. 16, p. 660.

(ii) *Coast Line.* The coasts of the large islands often rise steeply from the water, with bold headlands; but as a rule there is a beach, frequently overgrown with mangroves. Sunken rocks and coral reefs fringe many of the coasts, especially of the low islands. There are many good harbours, the chief being Blanche Bay, in New Britain, containing the good anchorages of Matupi Harbour and Simpson Harbour; Kavieng Harbour in New Ireland; Mioko in the Duke of York Islands; Peter Harbour in the Vitu Islands; Nares Harbour in Manus Island; and Queen Carola Harbour in Buka Island.

(iii) *Rivers.* Most of the streams in these islands are too shallow and too rapid for navigation.

§ 2. Climate and Health.

1. **General.**—The Territory has a moist tropical climate, with small differences between daily and seasonal extremes of temperature. There is no cool season, rain falls in all months, and the humidity is high. The Territory is outside the area of typhoons, but strong winds are not uncommon, and damage is occasionally done to plantations.

2. **Temperature.**—The mean annual temperature on the coast is about 26° to 27.5° C. (79° to 81° F.)—a moderate temperature for the latitude—and the difference between the means of the coldest and warmest months is not more than 2° F.

3. **Rainfall.**—There is no really dry season. At Rabaul the period of the north-west monsoon, November to April, is wetter than that of the south-east trade from May to September or October; but in some other places, especially the south coast of New Britain and in the vicinity of Finsch Harbour, the south-east trade brings the principal rains. The position of the coast with regard to the direction of the prevailing winds is the decisive factor in the rainfall. The annual rainfall amounts, at nearly all the stations at which observations have been made, to over 80 inches. Additional information under this heading is given in Official Year Book No. 18, page 642.

4. **Humidity.**—The humidity is very high. Observations taken at Rabaul during the years 1916 to 1921 showed an average humidity of 75 per cent., and the variation in the monthly means was only from 69 per cent. (October) to 80 per cent. (April). At Madang, during the same period, the yearly average was 80 per cent., the lowest monthly mean 77 per cent. (August), the highest 83 per cent. (April). During the same period at Kieta (Bougainville) the mean was 78 per cent., the minimum 74 per cent. (August and October), and the maximum 80 per cent. (June).

5. **Influence on Health.**—The climate in North-East New Guinea and at many places in the Bismarck Archipelago and the Solomon Islands is enervating for Europeans. At some places, however, and notably at Rabaul, the heat and humidity are tempered by the constant breezes, and it is possible for Europeans, with careful attention to diet and exercise, and precautions against diseases, to maintain good health. When the measures taken against malaria and other diseases have produced their full effect, and use has been made of places in the mountains suitable for sanatoria, it is hoped that a satisfactory average of health will be maintained.

§ 3. Government.

1. **The Military Occupation.**—On the 17th September, 1914, the Acting Governor of German New Guinea signed terms of capitulation with the officer commanding a Naval and Military Expedition sent from Australia, and thereafter the Territory was under military administration until the establishment of Civil Government in May, 1921.

2. **Mandate.**—The Mandate in accordance with which the Territory of New Guinea is administered by the Commonwealth was issued by the League of Nations in December, 1920. The terms of the Mandate appear in Official Year Book No. 16, p. 662–3.

3. **New Guinea Act.**—In anticipation of the issuing of the Mandate, the Commonwealth Parliament had already, in September, 1920, passed the New Guinea Act 1920, by which the Governor-General was authorized to accept the Mandate when issued. The Territory was, by the Act, declared to be a Territory under the authority of the Commonwealth, by the name of the Territory of New Guinea.

The Act provided for an Administrator, while power to legislate for the Territory was to be exercised by the Governor-General, and provision was also made for the observance of safeguards in the interests of the natives as set out in the Mandate.

4. **Establishment of Civil Government.**—Official Year Book No. 19, p. 586, contains an account of the establishment of Civil Government of the Territory. Owing to considerations of space however the information is not repeated here.

5. **Expropriation.**—The Treaty of Peace provided that German nationals resident in her former colonies might be repatriated ; and that the property rights and interests of German nationals in former colonies might be retained and liquidated by the Allies, the proceeds being credited to Germany in part payment of the reparation payable by her under the Treaty. In pursuance of these powers, in September, 1920, the property of the principal German companies in the Territory, and in March, 1921, that of a large number of German planters, was vested in the Public Trustee ; and the management of their businesses and plantations was entrusted (pending the sale or other disposal of the properties) to the Expropriation Board. (See Year Book No. 17, p. 631). In 1926 and 1927 these plantations were transferred to private owners.

6. **Departments and Districts.**—The Administration is organized in seven Departments—Government Secretary ; Treasury ; Native Affairs ; Public Health ; Customs and Shipping ; Lands, Mines, Surveys, and Forestry ; and Agriculture. The Public Works Department was abolished during the year under review, and its activities placed under the control of the Government Secretary.

For administrative purposes, the Territory is divided into nine Districts, generally named after the principal stations in them. They are as follows :—New Britain, comprising New Britain and adjacent islands ; on the Mainland—Morobe, Madang, Aitape, and Sepik ; in New Ireland and Lavongai (New Hanover)—Kavieng and Namatanai ; in Admiralty Islands and adjoining islands—Manus ; in Solomon Islands—Kieta. Alterations in regard to districts have been made from time to time. Each district is under a District Officer, assisted by a small staff.

7. **Statute Law.**—The Acts of the Commonwealth Parliament do not (unless expressly so stated) extend to the Territory, but the *Laws Repeal and Adopting Ordinance* 1921, provided that certain Acts and Ordinances should be applied thereto. (See Year Book, No. 17, p. 631.)

8. **Reports to the League of Nations.**—Seven Reports have been rendered to the League of Nations in compliance with Article 6 of the Mandate, the latest being for the year ended 30th June, 1927.

§ 4. Population.

1. **White Population.**—The increase in the white population at various intervals since 1885 is shown in the appended tabulation. On 4th April, 1921, it was 1,288, of whom about 250 were missionaries, and 262 were persons engaged in administration ; 715 were British subjects, and nearly all the remainder were nationals of former enemy countries. On 30th June, 1927, the number of Europeans was about 1,800.

TERRITORY OF NEW GUINEA.—WHITE POPULATION, 1885 TO 1927.

Year.	Number.
1885	64
1895	203
1910	687
1914	1,027
1921	1,288
1927	1,800

2. **Asiatic Population.**—Malays seem to have been the first Asiatics brought by the Germans to German New Guinea; 37 of them are recorded on the mainland in 1885. About 1889 the New Guinea Company began to bring Chinese, Malays, and Javanese in growing numbers from Singapore and Java to work on its plantations; by 1892 there were about 1,800 on the mainland. By 1898 the number had decreased to 300 or 400, while at present it is less than 250.

About ten years later, Chinese were brought from China to the Protectorate; in 1911 there were 555, in 1914, 1,377, in 1921, 1,424, and in June, 1927, less than 1,300.

In 1895 there were 2 Japanese in the Protectorate, in 1911 there were 25, in 1914, 103, in 1921, 87, and in June, 1927, about 55 residents. The total Asiatic population was 1,681 in 1914, and 1,778 in 1921. There were also, in 1921, 28 Polynesians and 69 half-castes.

The number of Asiatics has slightly decreased. In 1926–27 the births of Chinese exceeded the deaths by 15, but departures exceeded arrivals by 40, so that the population decreased by 25. The number of Japanese remained stationary.

The Chinese provide the skilled artisans of the Territory, and many of them are small traders. Most of the Japanese residents are employed in the plantations, shipyards, and stores.

3. **Native Population.**—As a large portion of the Territory is not under Government influence it is not possible to obtain reliable figures in regard to the number of the natives. The following table shows the number enumerated in 1925–26.

TERRITORY OF NEW GUINEA.—NATIVE POPULATION, 1925-26 (EXCLUSIVE OF INDENTURED LABOURERS).

Places.	Children.			Adults.			Total.		
	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.
New Britain ..	14,010	11,401	25,411	21,803	21,022	42,825	35,813	32,423	68,236
New Ireland ..	6,702	5,201	11,903	13,097	13,772	26,869	19,799	18,973	38,772
Admiralty Group	2,474	2,276	4,750	4,235	4,774	9,009	6,709	7,050	13,759
Solomon Islands	6,829	5,371	12,200	11,410	12,345	23,755	18,239	17,716	35,955
N.G. Mainland ..	29,622	22,850	52,472	42,682	40,892	83,574	72,304	63,742	136,046
Total ..	59,637	47,099	106,736	93,227	92,805	186,032	152,864	139,904	292,768

The total native population in the Territory is estimated roughly at about 425,000. Whether the number is increasing or decreasing cannot yet be ascertained with certainty. The number of natives indentured as labourers, mostly for plantation work, on 30th June, 1927, was 27,002, compared with 23,002 in the previous year.

§ 5. The Natives.

1. **General.**—A brief description of the native inhabitants of the Territory was included in Year Book No. 16, page 670. It may be noted here that the natives are divided into two main groups—Melanesian and Papuan—the former, with odd exceptions constituting the population of the Bismarck Archipelago, the Solomon Islands, and the coastal districts of the New Guinea mainland; while the latter inhabit the interior of the mainland. Odd tribes of Negritoes are known to exist in the mountains of New Guinea. In the Admiralty Islanders there is a strain of Papuan, and, possibly, of Polynesian blood, while the Western Islanders and the inhabitants of the small islands east and south-east of New Ireland are Micronesians.

2. **Land Tenure.**—Native customs in regard to the ownership and use of land may be briefly outlined as follows:—The ownership and use of the land are generally individual, although, in some rare cases, particularly in North Bougainville, the communal system exists. In districts where a great many coconut-bearing palms are growing on native lands it is often found that the land is the property of a chief or of one of the old men of the tribe, and that the coconut palms growing thereon are divided into small groves, and are the property of several members of the tribe. Customs with regard to the use of unoccupied forest lands vary. Right of inheritance to land is almost invariably through the maternal branch. (See Year Book No. 17, p. 634.)

3. Research Work.—During the German occupation of the Territory a certain amount of research work was carried out, partly by scientific expeditions, and partly by missionaries and by a local resident. An anthropologist has been appointed by the Commonwealth Government to consolidate the work already done, and to extend it to parts of the Territory which have not yet been covered. The results of his work appear in special reports.

4. Education.—The education of the natives was provided for in the "Education Ordinance of 1922," under which the Administrator was authorized to establish schools, grant money therefor, prescribe instruction, and arrange for the training of teachers and other matters. Simultaneously a Native Education Trust Fund was inaugurated, over which the Administrator was given control, and for the benefit of which he was empowered, within certain limits, to levy taxes on the natives and on employers of native labour. The expenditure on native education in 1925–26 was £8,968. This included £1,400 spent in the erection of new buildings. Though the natives are liable to pay education tax none has been collected since 1922–23, whereas a sum of £10,914 was obtained in 1925–26 from a tax levied on employers of native labour.

A Government educational establishment has been founded at Malaguna, near Rabaul, and it is proposed to make it the educational centre for the natives in the Mandated Territory. It is intended to establish elementary schools in all districts; to these schools native children will be admitted as boarders, and those who attain a prescribed standard of proficiency will be transferred to the school at Malaguna, which will be converted into a secondary school. Upon the completion of their education in the secondary school, the pupils will proceed either to the technical school or to service in the Administration, where they will be given positions as interpreters, clerks, teachers, etc. English has been made the school language. (See Year Book No. 17, p. 635.)

A considerable amount of educational work is carried out by the missions, the schools maintained being of three classes—(*a*) elementary schools in villages; (*b*) intermediate boarding-schools at head-quarters; and (*c*) high schools and technical schools. At the end of June, 1927, the various missions maintained 1,320 schools, employing 249 European teachers, 4 Asiatic and 1,159 native teachers. The pupils numbered 34,168.

The granting of assistance to mission schools is authorized by the Education Ordinance, but no grants have hitherto been made.

5. Health of Natives.—In a report dealing with the health of the natives in New Britain submitted before the war, it was stated that "the natives in the districts examined are not degenerate; but they are sick." The same qualification undoubtedly applies to the native population throughout the Territory.

The diseases taking the greatest toll of native life—directly, or through lowering vitality—are:—Malaria, respiratory diseases, dysentery, frambœsia, yaws, tropical ulcer, hookworm, filariasis, and beriberi. Further reference to this subject will be found in Official Year Book No. 18, p. 647.

The Health Department in Rabaul possesses:—(i) a staff of medical officers and orderlies, including travelling doctors; (ii) Native Hospitals at Government stations and sub-stations (its staff also supervises hospitals on plantations); (iii) a laboratory in Rabaul; (iv) training system for natives as medical orderlies; (v) scheme of distribution of medical necessaries; (vi) a leper-station near Madang; and (vii) undertakes the general oversight of sanitary conditions. During the year a temporary staff has been employed combating venereal disease.

6. Missions.—There is a number of mission societies working in the Territory. The Society of the Sacred Heart of Jesus works in the Bismarck Archipelago, the Society of the Holy Ghost along the coast of North-East New Guinea from Sek to the Dutch border, the Marists in Buka and Bougainville. These are Roman Catholic Missions. The Protestant Missions are the Australian Methodist Mission in New Britain and New Ireland, the New Zealand Methodist Mission in Bougainville, the Liebenzell Mission in the Admiralty Group, and the Lutheran Mission (supported and staffed by the Lutheran Churches in Australia and America), which work along the coast of North-East New Guinea from Sek to the Papuan border. All these societies combine teaching and planting with their missionary work. The missionaries working in the Mandated Territory in 1927 numbered 373, comprising American, 28; Austrian, 7; Belgian, 1; British, 53; Dutch, 40; French, 25; German, 197; Italian, 2; Luxemburgese, 6; Polish, 11; Free City of Danzig, 1; Czecho-Slovak, 2. Some of the societies have small printing plants by which reading matter in one or other of the native languages is produced.

§ 6. Land Policy.

1. **Acquisition of Land.**—A short account of the modes of acquiring land appears in Official Year Book No. 19, p. 590, but considerations of space preclude its repetition herein.

2. **Land Policy of the Present Administration.**—The Land Ordinance 1922–24 provides for sale as well as leasing of land belonging to the Crown. The divergence from the policy usually adopted by the British in the Pacific (including Papua), which provides for leasehold only, was made with a view to disposing by sale of the freehold properties taken over from Germans, and which until recently were controlled by the Expropriation Board. Reference to the leasehold system in force will be found in Official Year Book 18, page 648.

During the year 1926–27, 50 new leases and 227 trading allotment licences were granted.

3. **Registration of Titles.**—Under German law there was a system of registration of titles in a "Ground Book," but registration did not confer an indefeasible title. The German system has been replaced by one modelled on the Torrens plan, embodied in an Ordinance entitled the "Lands Registration Ordinance," 1924.

§ 7. Production.

1. **General.**—The Territory possesses great natural resources, but their development has barely commenced, and progress in this direction will depend largely on the possibility of securing an adequate supply of suitable labour.

2. **Agriculture.**—(i) *General.* No estimate has yet been made of the area of land suitable for agriculture; but it is certain that the area already alienated, if planted to its full capacity, would be far greater than the present native population could cultivate.

The natives have been described as a people of peasant proprietors, and everywhere they practise a crude form of agriculture. Their gardens afforded but a small amount of produce for oversea trade, and the exports of the Protectorate grew only as European plantations were made. The average of the latter increased slowly, for the Protectorate is almost everywhere covered with forest, and the clearing and planting of the land, even if labour can be had, necessarily occupy considerable time. At the present stage, roads fit to carry wheeled transport are of paramount importance.

Under the supervision of the Director of Agriculture, soil analyses have been undertaken in different parts of the Territory, and experimental stations have been founded in Rabaul, Bita Paka, and in the Markham Valley. A laboratory and a herbarium have been established, and two travelling inspectors appointed for the purpose of combating plant pests. Experiments are being carried on with a variety of crops; these in conjunction with the *Papua and New Guinea Bounties Act* 1926, and the preference given by the Commonwealth Tariff to certain produce grown in the Territories are expected greatly to stimulate agriculture.

(*a*) *Tobacco.* This crop has been cultivated with success at Astrolabe Bay in North-East New Guinea, and in the Bismarck Archipelago. Tobacco of high quality, rivalling the best Sumatra leaf, is said to have been produced. Later, the growing of tobacco on European plantations was abandoned, partly, it is said, for want of intelligent labour, although it continued to be grown by the natives for their own use.

(*b*) *Cotton.* In 1924–25 the Government obtained 1,615 lb. of cotton seed, and experiments are being carried on at the experimental stations as well as by private planters, including a few natives.

(*c*) *Sisal Hemp.* There was a steady although small export of sisal hemp in German times. The quantity exported in 1913 was 10 tons, but none seems to have been exported since 1914.

(*d*) *Cocoa.* Cocoa has been successfully grown, principally at Vitu (French Islands); in 1913, 137 tons were exported. The yield in 1926–27 was 65 tons.

(*e*) *Coffee.* Coffee is grown, but to little extent.

(*f*) *Rubber.* On the mainland a small area has been planted with *Ficus elastica*, but in consequence of the low price of the inferior rubber produced from this source the trees are not being tapped.

(*g*) *Copra.* Indigenous in most of the islands, the coconut palm yielded copra to the traders from the beginning of European trade, and the plantations, commenced in 1883, have steadily extended in area and production. The quantity exported in 1926–27 was 47,613 tons, an increase of 1,807 over the figures for the previous year. The area under coconuts increased from 76,845 acres in 1914 to 177,621 acres on 30th June, 1927, of which 138,447 were in bearing.

(*h*) *Other Crops.* The climate and soil of the Territory are suitable for the cultivation of rice, Manila hemp, cinchona, nutmeg, vanilla and maize, but hitherto their cultivation has either not advanced beyond the experimental stage or has been attempted on a small scale only. Sugar-cane of many varieties flourishes, and the natives cultivate extensive areas for their own use; other indigenous food-producing plants include the sago palm and the cassava.

(*i*) *Plants Yielding Power Alcohol.* It seems probable that alcohol for power purposes will be obtainable economically from the Territory. The sago palm and nipa palm yield as much as 60 gallons a ton, and in places are very abundant.

(ii) *Area of Plantations.* The area of plantations and the principal crops grown thereon are shown in the table hereunder for the year ended 30th June, 1927. The figures are exclusive of native plantations.

TERRITORY OF NEW GUINEA.—PLANTATIONS, 30th JUNE, 1927.

Particulars.		Government Plantations.	Privately owned Plantations.	Controlled by Expropriation Board.	Total.
Area of Holdings	acres	3,452	300,463	73.803	377,718
Area Cleared	„	2,568	150,240	39,105	191,913
Area Cleared and Planted	„	2,390	144,659	38,957	186,006
Coconuts—					
Area Planted	acres	2,345	137,371	37,905	177,621
Area Bearing	„	1,813	104,155	32,479	138,447
Rubber—					
Area Planted	acres	..	2,565	1,030	3,595
Area Bearing (*a*)	„	..	2,565	1,030	3,595
Cocoa—					
Area Planted	acres	..	916	74	990
Area Bearing	„	..	618	74	692
Coffee—					
Area Planted	acres	..	19	..	19
Area Bearing	„	..	17	..	17
Maize—					
Area Planted	acres	..	278	..	278
Area Bearing	„	..	99	..	99
Native Food—(*b*)					
Area Planted	acres	64	2.277	91	2,432
Area Bearing	„	64	1,573	79	1,716

NOTE.—(*a*) Rubber not tapped. (*b*) Native food of all kinds is mostly grown between young coconut palms not yet in bearing, therefore the total area cleared and planted does not agree with the detailed areas under various crops.

The area of plantations at various periods from 1885 to 1927 is shown hereunder. As in the case of the previous table, the figures are exclusive of native plantations:—

TERRITORY OF NEW GUINEA.—PLANTATIONS, 1885 TO 1927.

Year.	Total Area.	Area in Coconuts (including Area not in Bearing).
	Acres.	Acres.
1885	148	(*a*)
1895	2,152	(*a*)
1911	58,837	51,510
1914	84,941	76,845
1924	179,163	172,373
1927	186,006	177,621

(*a*) Not recorded.

3. **Live Stock.**—There is little natural pasture in the Territory, but the coconut plantations are now of a sufficient area to maintain numerous live stock, the stock being depastured on the indigenous grasses growing between the rows of trees. In 1926 there were 821 horses, 10,163 cattle, 3,020 sheep, 5,204 goats, and 5,982 pigs (exclusive of the large number of pigs kept by the natives). (See also Official Year Book No. 16, page 677.)

4. **Timber.**—An investigation of the timber resources of the Territory has been made by the Commonwealth Forestry Adviser, and a report in connexion therewith was published in 1926. According to this report, while offering no prospects of immediate gain to large saw-milling interests the Territory possesses forest potentialities of a high order. The timber required for house and ship-building and for other purposes is mostly obtained locally. In North-East New Guinea the Neuendettelsauer Mission and the Holy Ghost Mission both possess up-to-date saw-milling plants, while most of the timber required in the Archipelago is supplied by the Sacred Heart Mission's saw-mill, and by two privately-owned mills, all at the eastern end of New Britain.

The Timber Ordinance 1922 provides for the issue of permits and licences to cut timber. Timber growing on native lands cannot be acquired by private purchasers directly from the natives, but must be obtained through the Administration. A royalty is to be paid on all timber exported.

5. **Fisheries.**—The wealth of the waters of the Territory has so far been little exploited. Fish is caught at many places along the coast to supply the small local demand of the natives and of the few resident Europeans. Pearl-shell is exported in fair quantities, while trepang, shark fins, trochus-shell, and tortoise-shell also figure amongst the exports. The value of marine products exported in 1926–27 was £30,923, compared with £56,093 in the previous year.

6. **Mining.***—There has been little mining in the Territory, and knowledge of the mineral resources is as yet but scanty. Gold has, however, been discovered on the Waria, the Ramu, the Francisco, and the Markham Rivers, etc. Rich gold was discovered in the Morobe District in 1926; the field is not very extensive and is situated 60 miles inland. Communication has been established with the coast by a regular aeroplane service. Osmiridium is reported to have been found on the upper tributaries of the Ramu, and platinum on the Kabenau River. Copper has been discovered in the form of chalcopyrite and malachite in the Baining District. Iron occurs as magnesite and hæmatite in the Baining District, apparently in large quantities. Sulphur occurs in several localities in the volcanic regions of the Territory. Phosphates suitable for use in the making of manures are found in the Purdy Islands. Brown coal has been found on the mainland in the vicinity of Astrolabe Bay, and in the southern portion of New Ireland.

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* Fuller details in regard to minerals in the Territory will be found in E. R. Stanley's Report on Salient Geological Features and Natural Resources of the Territory (printed as Appendix B. to the Report for 1921–22).

The number of miner's rights issued during 1926–27 was 472. The quantity of gold exported from the Territory during the year was 10,067 ounces.

By the Mining Ordinance of 1923, private companies incorporated or registered in the Territory, two-thirds of whose shares are held by British subjects, became eligible to engage in prospecting and mining for mineral oil and coal. On the 30th June, 1927, 38 licences to search for mineral oil had been issued, of which only 8 were in force on the date mentioned.

§ 8. Trade.

1. **Total Trade.**—The value of the imports, exports, and total trade at various periods since 1887, and during each of the last five years, is given in the table hereunder :—

TERRITORY OF NEW GUINEA.—TRADE, 1887 TO 1927.

Year.	Imports.	Exports.	Total.
	£	£	£
1887	17,133	19,580	36,713
1897	36,713	31,352	68,065
1907	166,585	97,563	264,148
1922–23	516,855	630,892	1,147,747
1923–24	485,634	718,535	1,204,169
1924–25	537,940	858,990	1,396,930
1925–26	568,339	1,105,158	1,673,497
1926–27	660,753	1,079,855	1,740,608

The import values are exclusive of money and Government stores. In 1926–27 the imports were distributed as follows :—From Australia, £569,704 ; America, £24,065 ; China, £20,345 ; Straits Settlements, £28,279 ; Burma, £15,675 ; and Caroline Islands, £2,685.

2. **Principal Items of Imports.** Particulars of the value of principal items imported during past years are contained in previous issues of this work.

3. **Principal Items of Export.**—Values of the principal items of export for the last five years are shown hereunder :—

TERRITORY OF NEW GUINEA.—EXPORTS, VALUE OF ITEMS, 1922–23 TO 1926–27.

Commodity.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
Copra	619,715	686,519	815,938	1,016,930	849,852
Cocoa	3,734	3,602	6,949	6,510	3,500
Stone and Ivory Nuts ..	336	192	312	456	152
Trepang	964	908	1,975	8,246	13,750
Shell	5,535	9,574	15,009	47,434	17,000
Tortoise Shell..	222	877	295	413	173
Gold	..	16,542	18,512	25,169	195,428
Miscellaneous	386	321	..	..	..
Total	630,892	718,535	858,990	1,105,158	1,079,855

4. Exports of Copra, and Cocoa.—The next table shows the quantities, where available, of the exports of these items during the last five years :—

TERRITORY OF NEW GUINEA.—EXPORTS OF COPRA, AND COCOA, 1922–23 TO 1926–27.

Commodity.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	Tons.	Tons.	Tons.	Tons.	Tons.
Copra	32,648	34,974	39,151	45,806	47,613
Cocoa	83	70	135	113	65

Of the 47,613 tons of copra exported in 1926–27, 32,783 tons went to countries other than Australia.

5. Banks.—There are two banks operating in the Territory, the Commonwealth Bank of Australia, and the Bank of New South Wales.

§ 9. Shipping and Communication.

1. General.—A subsidized mail service between the Territory and Australia is maintained by Burns, Philp and Co. Ltd. There is a regular service between the East and Australia with Rabaul as a port of call. Shipping within the Territory is regulated by the *Coastal Vessels Regulations*, 1920, and the *Wharfage and Berthage Regulations* made during the Military Administration of the Territory.

2. Oversea Tonnage in 1926–27.—The number and net tonnage of oversea vessels which entered and cleared the Territory during the year 1926–27 are shown hereunder :—

TERRITORY OF NEW GUINEA.—SHIPPING, 1926–27.

Nationality.	Entered.		Cleared.		Total.	
	No.	Net Tonnage.	No.	Net Tonnage.	No.	Net Tonnage.
British	40	82,381	33	77,219	73	159,600
Japanese	2	534	2	534	4	1,068
Norwegian	2	5,519	2	5,519	4	11,038
Total	44	88,434	37	83,272	81	171,706

Country from which Entered or for which Cleared.	Entered.		Cleared.		Total.	
	No.	Net Tonnage.	No.	Net Tonnage.	No.	Net Tonnage.
Australia	27	58,949	20	41,725	47	100,674
Caroline Islands	2	534	2	534	4	1,068
China	3	10,528	3	10,528	6	21,056
European Ports	..	..	9	28,256	9	28,256
Japan	1	3,155	..	..	1	3,155
Nauru	1	192	..	..	1	192
Papua	4	192	3	2,229	7	2,421
Rangoon (Burma)	1	3,149	..	..	1	3,149
Singapore..	2	3,707	..	..	2	3,707
Solomon Islands	1	3,358	..	..	1	3,358
U.S.A.	2	4,670	..	..	2	4,670
Total	44	88,434	37	83,272	81	171,706

3. **Local Shipping.**—A service between Rabaul and the various outports not visited by the mail steamers is maintained by small steamers and motor craft.

4. **Land Communication.**—Means of communication on land are scanty. There are no railways. Roads lead from Rabaul to places within 30 or 40 miles, and there is a road 170 miles long in New Ireland. Elsewhere there are few roads outside plantations and the stations of the District Officers. The large rivers of the mainland are as yet but little used.

There is a high power wireless station at Bita Paka near Rabaul, and low power stations at the out-stations. Since 1st July, 1921, all these have been placed under the control of Amalgamated Wireless (Australasia) Limited.

§ 10. Revenue and Expenditure.

1. **Revenue.**—Details of the revenue collected from various sources during each of the last two years are given hereunder :—

TERRITORY OF NEW GUINEA.—REVENUE, 1925-26 TO 1926-27.

Heading.	1925–26.			1926–27.		
	£	*s.*	*d.*	£	*s.*	*d.*
Revenue from Taxation (direct and indirect) ..	188,695	1	10	206,525	6	11
Revenue from Public Services and undertakings ..	36,919	15	9	40,226	15	11
Other receipts	31,689	10	3	35,765	9	0
Appropriation of former years	1,713	18	5	87	6	5
Transfer from Trust to Revenue of amount recorded as due to the Commonwealth of Australia in respect of stores and services supplied by the Defence Department, payment of which has been waived for the present by the Commonwealth	..			22,916	19	9
	259,018	6	3	305,521	18	0

2. **Expenditure.**—The expenditure for the financial year 1926–27 was distributed as follows :—

TERRITORY OF NEW GUINEA.—EXPENDITURE, 1926–27.

Secretary and Central Administration	£16,875
Justice	3,726
Treasury	33,141
Audit	3,137
Lands and Survey	11,873
Native Affairs, Police, and Prisons	11,963
Public Works	40,687
Trade and Customs	£15,337
Agriculture	5,698
Public Health	52,057
District Services	80,747
Miscellaneous	4,949
Total ..	280,190

F. NAURU.

1. **General.**—Nauru is an oval-shaped atoll about 12 miles in circumference having an area of 5,400 acres, of which approximately four-fifths is phosphate-bearing. It is situated in long. 166° E., and is 26 miles south of the Equator. Portion of the island between the sandy beach and the coral cliffs is fertile, and it is there that the native Nauruans have established themselves. With the exception of a small fringe round an inland lagoon, the plateau which contains the phosphate deposits possesses few food plants and is uninhabited, but portion of the area has been planted with fruit trees. The system of land tenure is governed by old custom, and, with the exception of small allotments held by the Government and Missions, the whole of the island is owned by individual natives. The climate is hot, but not unpleasant, the average shade temperature ranging between 72 and 95° F., and the average humidity between 70 and 80. The average rainfall is 120 inches, but droughts occasionally occur, and in 1916 and 1917 only 40 inches were received for the two years.

2. **History.**—The island was annexed by Germany in 1888, and prior to 1914 was part of the protectorate of German New Guinea.

In November, 1914, Nauru was occupied by a detachment from the Australian Expedition at Rabaul; and it was included in the cession of colonies made by Germany in 1919 to the Allied and Associated Powers, whose representatives agreed that a mandate over it should be given to His Majesty the King. On 2nd July, 1919, the British, Commonwealth, and New Zealand Governments agreed that the administration of the island (which, since 1915, had been in charge of an official appointed by the British Colonial Office) should be vested in an Administrator; the first Administrator was appointed for a term of five years by the Australian Government; his term of service having expired in February, 1926, it was extended for another five years. The Agreement between the three Governments was approved by the Commonwealth Parliament in the Nauru Island Agreement Act 1919, and is printed in the Schedule to that Act. The first Administrator appointed by the Commonwealth Government assumed duty in June, 1921.

The Mandate for Nauru, issued by the Council of the League of Nations in December, 1920, is in terms similar to that for the Territory of New Guinea.

3. **Administration.**—The Administrator has all the powers of government—administrative, legislative, and judicial—in the island. An Advisory Council has been created which consists of two Europeans chosen by the Administrator, and two native chiefs elected by the natives. All expenses of administration are met from local revenue. Native industries such as canoe-building, fishing, mat-making, etc., are encouraged by the provision of prizes at annual competitions. A branch of the Commonwealth Savings Bank has been established, and the deposits by natives in 1926 amounted to £7,000, as compared with £4,154 in 1924. There is a co-operative store managed by the natives themselves, the books, however, being audited by Government officers. Natives are not allowed to carry firearms, and the use by them of intoxicating liquors and deleterious drugs is prohibited.

4. **Population.**—Figures for population from 1923 to 1927 are given hereunder :—

NAURU.—POPULATION, 1923 TO 1927.

Population.	31st December, 1923.	31st December, 1924.	31st December, 1925.	1st April, 1926.	1st April, 1927.
Europeans	110	125	124	117	115
Chinese	603	785	827	822	761
Nauruans(a)	1,179	1,219	1,239	1,251	1,266
Other South Sea Islanders ..	117	11	10	27	21

(a) The natives of Nauru are Micronesians.

The birth rate among the Nauruans in 1927 was 45.03 per 1,000, the death rate 18.2 per 1,000, and the rate of infantile mortality 105.3 per 1,000.

5. **Health.**—There is no malaria, but cases occur of other diseases known in the Pacific. Venereal disease is rare, but in 1927 the cases of leprosy treated numbered 337. An area has been set apart for the segregation of lepers, and the latest methods of treatment are applied to cope with the disease. Two hospitals are maintained on the island, one by the Administration for Nauruans, and one by the British Phosphate Commission for its employees. In common with other natives, the Nauruans are very susceptible to tuberculosis and influenza, and in 1921 an influenza epidemic caused the deaths of 230 islanders. Dysentery, both amœbic and bacillary, is endemic. The usual steps are being taken by the authorities to improve the water supply and to provide efficient sanitation generally. A baby clinic has been established to give help and advice to Nauruan mothers in regard to infant nurture.

6. **Education.**—On the 1st October, 1923, the Administration took over the education of the Nauruans and other native children, and native schools were established in four districts and at the leper station. Previously education had been looked after by the Missions subsidized by the Government. A school for European children is presided over by a teacher on loan from the Education Department of Victoria, who also supervises educational matters generally. The curriculum is similar to that of corresponding schools in Australia, and the teaching is, as far as possible, wholly in English. Education is compulsory between the ages of six and sixteen. After the termination of ordinary school attendance, twelve months are devoted to technical training. Officers from the Missions visit the schools to give religious and moral training. A museum for the preservation of Nauruan antiquities is in process of formation.

7. **Religion.**—The London Missionary Society (Protestant) and the Sacred Heart of Jesus Mission (Roman Catholic) operate in Nauru, and in 1927 the adherents to the former numbered 843, and to the latter 402.

8. **Phosphate Deposits.**—(i) *General.* Since 1906 the deposits have been worked by the Pacific Phosphate Company, which also worked the deposits on Ocean Island (about 165 miles east of Nauru and part of the Gilbert and Ellice Islands Colony administered by the Colonial Office). The quantity on the two islands has been estimated at not less than 100,000,000 tons, and the rock phosphate, as shipped, averages 85 per cent. to 88 per cent. of tribasic phosphate of lime. About 4,000,000 tons have already been removed.

The interests of the Pacific Phosphate Company in the two islands (though not in other islands in the Pacific in which it has workings) were bought by the British, Commonwealth, and New Zealand Governments in 1919 for £3,500,000, the purchase money being contributed in the proportions of 42, 42, and 16 per cent. respectively. The Agreement of 2nd July, 1919, provides for the working of the deposits by the British Phosphate Commission of three members, one appointed by each Government; and the three countries are to receive the output in the same proportions of 42, 42, and 16 per cent.

(ii) *Output.* The output from the two islands in 1913, the last year before the war, was 350,000 tons. During the five years 1921–22 to 1925–26 exports were as follows:—

NAURU AND OCEAN ISLAND.—EXPORT OF PHOSPHATES, 1921–22 TO 1925–26.

Year.	Total.	To Australia.	To New Zealand.	To United Kingdom.	To other Countries.
	Tons.	Per cent.	Per cent.	Per cent.	Per cent.
1921–22	361,205	47.20	10.64	4.45	37.71
1922–23	311,650	65.43	16.54	..	18.03
1923–24	450,924	70.67	13.46	..	15.87
1924–25	473,647	71.11	21.01	..	7.88
1925–26	393,032	69.76	24.97	..	5.27

From Nauru alone, during the calendar year 1927, the export was 318,185 tons, of which 220,415 tons went to Australia, and 97,770 tons to New Zealand.

(iii) *Accounts of Commission.* A statement for the five years ended June, 1926, is given hereunder.

NAURU AND OCEAN ISLAND.—SALES OF PHOSPHATES, 1921-22 TO 1925-26.

Receipts from Sales of Phosphate, Etc.	1921-22.	1922-23.	1923-24.	1924-25.	1925-26.
	£	£	£	£	£
Receipts from sales, etc. ..	823,045	542,348	695,940	705,293	611,654
F.o.b. cost, including interest on capital, Sinking fund, etc. ..	732,407	538,099	651,102	635,675	607,256

The f.o.b. cost of phosphate was 37s. 10d. in 1920–21; 40s. 7d. in 1921–22; 34s. 6d. in 1922–23; 28s. 10d. in 1923–24; 26s. 10d. in 1924–25; and 31s. 1d. in 1925–26.

The amount due by the Commission to the partner Governments for purchase money and other capital sums was £3,666,457 on 30th June, 1921, and at 30th June, 1926, this had been reduced to £3,446,656. The contribution to the sinking fund paid by the Commission provides for interest at 6 per cent. and extinction of the capital sum in 50 years from 1st July, 1920.

(iv) *Employees.* Apart from a limited number of Europeans and a few Pacific Islanders the employees are Chinese, engaged under a three years' contract. A few Nauruans are from time to time employed, but they are not partial to sustained labour of any kind.

9. **Trade.**—Information regarding imports and exports for years 1923 to 1927 is appended herewith :—

NAURU.—IMPORTS AND EXPORTS, 1923 TO 1927.

Heading.	1923.	1924.	1925.	1926.	1927.
	£	£	£	£	£
Imports..	53,685	100,254	63,576	104,117	82,650
Exports—	tons.	tons.	tons.	tons.	tons.
Phosphate	212,300	280,990	224,260	274,935	318,185
Copra	121	383	170	117	263

10. **Revenue and Expenditure.**—The revenue and expenditure of the Administration during the years 1923 to 1927 were as follows :—

NAURU.—REVENUE AND EXPENDITURE, 1923 TO 1927.

Heading.	1923.	1924.	1925.	1926.	1927.
	£	£	£	£	£
Revenue	11,837	18,200	15,175	16,424	17,041
Expenditure	10,266	13,580	15,257	13,963	17,243

Of the revenue in 1927, £8,050 was royalty on phosphate, £2,863 consisted of Customs receipts, £1,614 of capitation taxes, and £768 of harbour dues. The total credit balance on the 31st December, 1927, amounted to £14,159.

CHAPTER XVI.

PASTORAL PRODUCTION.

§ 1. Initiation and Growth of Pastoral Industry.

1. **Early Statistics.**—In earlier issues of the Year Book will be found a brief reference to the pastoral industry in Australia prior to the year 1860. (See Year Book No. 6, page 330).

2. **Subsequent Statistics.**—While the statistical records of live stock in Australia prior to the year 1860 are somewhat defective, from that year onwards fairly complete particulars are available for most of the States. At the present time, statistics of live stock are collected annually in all the States principally through the agency of the police, but in the years 1885 to 1888 inclusive, and 1893 to 1895 inclusive, these particulars were not collected in South Australia, and similar gaps occur in the Victorian records for the periods 1895 to 1899 inclusive, and 1901 to 1903. In order to obtain totals for Australia for these years the missing numbers have been supplied by interpolation. The results so obtained probably differ but slightly from the actual numbers for the respective years.

3. **Increase in Live Stock.**—Particulars concerning the numbers of each of the principal kinds of live stock in Australia at decennial intervals from 1860 to 1920, and from 1922 onwards in single years, are given in the following table, and are shown continuously in the graphs hereinafter.

During the sixty-six years covered by the table the live stock of Australia increased considerably, horses 392 per cent., cattle 202 per cent., sheep 418 per cent., and pigs 182 per cent. The average annual increases which these aggregates represent are as follows :—Horses, 2.44 per cent. ; cattle, 1.79 per cent. ; sheep, 2.53 per cent. ; and pigs, 1.58 per cent.

LIVE STOCK.—AUSTRALIA, 1860 TO 1926.

Year.	Horses.	Cattle.	Sheep.(*a*)	Pigs.
1860	431,525	3,957,915	20,135,286	351,096
1870	716,772	4,276,326	41,593,612	543,388
1880	1,068,774	7,527,142	62,184,252	815,776
1890	1,521,598	10,299,816	97,881,221	891,138
1900	1,609,654	8,640,225	70,602,995	950,349
1910	2,165,866	11,744,714	98,066,046	1,025,850
1920	2,415,510	13,499,737	81,795,727	764,406
1922	2,390,460	14,336,673	82,700,514	985,930
1923	2,327,440	13,357,508	84,011,048	897,874
1924	2,292,050	13.309,473	93,154,953	980,009
1925	2,250,361	13,279,785	103,563,218	1,128,374
1926	2,122,516	11,963,278	104,267,101	989,009

(*a*) See note to Table in § 4. 2 hereinafter.

4. **Fluctuations.**—The increases referred to, however, have not been continuous marked fluctuations having taken place during the period mainly on account of the droughts which have from time to time left their impress on the pastoral history of Australia. These were in evidence in 1868, 1877, 1883–4, 1892, 1893, 1895, and subsequent years, 1901–2, 1912, 1914–15, 1918, 1919, 1922–23, and again in 1925–26, in which latter years Central and Northern Queensland experienced one of the driest periods on record, and a heavy mortality of stock.

As an offset to these visitations, good seasons invariably supervene on the dry periods, and the large natural increases occurring under these conditions greatly facilitate the process of restocking, thus bearing convincing testimony to the extraordinary recuperative powers of the country.

The years in which the numbers of live stock attained their maxima are as follows :—Horses, 1918, 2,527,149 ; cattle, 1921, 14,441,309 ; sheep, 1891, 106,421,068 ; and pigs, 1917, 1,169,365.

5. Live Stock in Relation to Population.—The number of each kind of live stock per head of the population of Australia has varied during the past sixty-six years in the manner shown in the succeeding table :—

LIVE STOCK PER HEAD OF POPULATION.—AUSTRALIA, 1860 TO 1926.

Year.	Horses.	Cattle.	Sheep.	Pigs.	Year.	Horses.	Cattle.	Sheep.	Pigs.
1860 ..	0.38	3.45	17.58	0.31	1920 ..	0.44	2.49	15.11	0.14
1870 ..	0.43	2.60	25.24	0.33	1922 ..	0.42	2.54	14.68	0.17
1880 ..	0.48	3.37	27.87	0.37	1923 ..	0.40	2.31	14.61	0.16
1890 ..	0.48	3.17	31.06	0.28	1924 ..	0.39	2.27	15.86	0.17
1900 ..	0.43	2.29	18.75	0.25	1925 ..	0.38	2.22	17.28	0.19
1910 ..	0.49	2.65	22.16	0.23	1926 ..	0.35	1.96	17.06	0.16

6. Live Stock in Relation to Area.—The numbers of live stock per square mile in the several States and Territories of Australia are given in the following table :—

LIVE STOCK PER SQUARE MILE, 1926.

States and Territories.	Horses.	Cattle.	Sheep.	Pigs.
New South Wales (a)	2.01	9.09	180.03	1.08
Victoria	5.10	16.34	169.77	3.23
Queensland	0.85	8.15	25.15	0.27
South Australia	0.62	0.89	19.16	0.21
Western Australia	0.17	0.85	7.64	0.07
Tasmania	1.40	8.13	68.95	1.48
Northern Territory	0.08	1.65	0.01	0.00
Federal Capital Territory (a) ..	1.47	5.86	238.38	0.10
Total	0.71	4.02	35.05	0.33

(a) 30th June, 1927.

7. Minor Classes of Live Stock.—The numbers of minor classes of live stock returned for 1926 were as follows :—Goats, 174,233 ; camels, 10,238 ; mules and donkeys, 17,166 ; and ostriches, 390. Of these, goats were most numerous in Queensland ; camels, mules and donkeys in Western Australia ; and ostriches in South Australia. In the raising of goats, attention has in recent years been devoted to the angora goat and its product (mohair), and about 11,000 angora goats are included in the total of 174,233 goats shown above. Of these, 1,926 were in New South Wales, 761 in Tasmania, 1,947 in Western Australia, 1,405 in South Australia, and 3,343 in Queensland, while the quantity of mohair produced in the latter State in 1926 was set down at 1,532 lbs., and the number of skins placed on the market was returned as 487.

8. Net Exports of Principal Pastoral Products.—The quantities by which the exports of the principal pastoral products of Australia exceeded the imports for the years 1922–23 to 1926–27 are as follows :—

NET EXPORTS OF PASTORAL PRODUCTS.—AUSTRALIA, 1922–23 TO 1926–27.

Products.	Unit of Quantity.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
QUANTITIES.						
Animals (living)—						
Cattle	No.	13,818	−71	9,674	9,898	10,093
Horses	”	3,545	1,478	4,604	5,255	5,276
Sheep	”	37,959	30,302	4,143	20,331	26,218
Bones	cwt.	23,276	26,158	23,748	27,329	18,394
Glue-pieces and Sinews ..	”	6,927	−1,993	−11,055	−8,757	— 12,840
Glycerine	lb.	343,292	−230,485	−489,113	−603,485	—553,950
Hair	”	(a)	(a)	(a)	(a)	(a)
Hoofs	cwt.	11,174	10,380	8,340	20,510	8,371
Horns	..	(a)	(a)	(a)	(a)	(a)
Meats—						
Frozen Beef	lb.	152,925,321	105,145,255	283,584,278	214,058,586	112,124,913
Frozen Mutton and Lamb	”	167,578,967	39,768,347	50,224,659	85,679,850	93,514,533
Frozen Rabbits and Hares	pair	4,264,054	3,489,496	3,415,334	4,043,511	3,298,372
Frozen, Other	lb.	13,062,037	6,687,005	9,141,545	8,935,456	3,893,937
Potted, and Extract of ..	..	(a)	(a)	(a)	(a)	(a)
Preserved in Tins, etc. ..	lb.	10,583,164	4,268,814	8,687,019	10,209,971	8,674,251
Other (excluding Bacon and Ham)	”	489,564	234,058	314,867	211,403	166,537
Sausage Casings.. ..	cwt.	24,623	13,213	26,860	24,119	24,222
Skins—						
Hides	No.	47,900	665,466	900,274	699,080	720,065
Sheep	”	10,237,162	6,891,162	6,016,231	8,007,249	8,487,652
Rabbit and Hare ..	cwt.	122,748	77,862	116,522	134,024	126,745
Other (including Undressed Furs)	..	(a)	(a)	(a)	(a)	(a)
Tallow	cwt.	1,016,831	394,313	855,596	824,974	833,336
Wool—						
Greasy..	lb.	597,429,649	478,210,488	489,669,907	767,812,768	709,438,954
Scoured	”	106,319,965	41,735,194	39,221,259	49,972,194	52,110,342
Tops	”	6,374,922	4,988,258	4,090,958	5,219,085	4,519,357

NOTE.—The minus sign — signifies net imports. (a) Quantity not available.

The values of the net exports for the same five years are furnished in the next table, and amount to no less a total than £368,382,182 for the period, or an average of £73,676,436 per annum, of which wool represents 81.04 per cent. Meat, skins, and tallow rank next in order of importance.

NET EXPORTS OF PASTORAL PRODUCTS.—AUSTRALIA, 1922–23 TO 1926–27.

Products.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
VALUES.					
	£	£	£	£	£
Animals (living)—					
Cattle	64,731	−31,430	43,628	32,632	43,663
Horses	27,978	−36,741	28,062	−8,655	35,313
Sheep	42,017	40,887	29,793	27,958	15,390
Bones	26,137	32,301	23,031	22,407	11,783
Glue-pieces and Sinews	13,725	21,688	10.363	3,071	— 6,442
Glycerine	8,536	−5,965	−10,898	−15,586	— 21,284
Hair	−62,830	−70,283	−73,556	−63,681	— 44,354
Hoofs	8,137	7,723	6,011	10,459	4,768
Horns	85,388	82,888	47,216	86,102	21,291
Meats—					
Frozen Beef	1,794,104	1,301,304	4,138,729	3,263,859	1,626,640
Frozen Mutton and Lamb ..	4,320,977	1,169,667	1,520,655	2,430,430	2,057,443
Frozen Rabbits and Hares ..	321,329	320,442	310,683	399,039	303,752
Frozen, Other	189,170	95,127	165,002	166,538	78,956
Potted, and Extract of	−40,170	−78,343	−49,953	−30,580	— 38,673
Preserved in Tins, etc.	266,273	94,094	247,405	328,888	279,167
Other (excluding Bacon and Ham)..	10,577	5,798	4,058	3,083	1,671
Sausage Casings..	285,504	154,068	208,673	259,299	179,434
Skins—					
Hides	249,208	338,263	800,639	713,589	605,600
Sheep	2,973,146	3,057,789	3,773,328	3,413,809	3,330,745
Rabbit and Hare	1,961,777	1,348,508	2,482,933	2,874,582	2,832,128
Other (including Undressed Furs) ..	785,467	798,166	328,325	569,744	1,026,667
Tallow	1,612,676	745,209	1,703,308	1,584,465	1,402,020
Wool—					
Greasy..	45 769,295	48,294,399	55,297,455	56,429,712	53,224,169
Scoured	9,898,651	6,298,197	6,524,471	5,537,671	5,726,308
Tops	1,412,683	1,161,920	1,119,849	1,035,107	822,713
Total Values	71,974,486	65,095,676	78,769,210	79,023,942	73,518,868

NOTE.—The minus sign — signifies net imports.

§ 2. Horses.

1. Suitability of Australia for Horse-breeding.—From the earliest times the suitability of the climate and pastures of Australia for the production of serviceable breeds of horses has been fully recognized. By the importation of high-class sires, and the careful selection of breeding mares, these natural advantages are utilized to the fullest extent, all classes of horses being bred. As a consequence of this combination of advantages, the Australian horse, whether of the heavy draught, medium weight, or light saddle and carriage variety, compares more than favourably with the product of other lands. The Australian horse has been found suitable for the army in India, and large numbers are obtained annually for remount purposes. During the war, Australian horses were found to be well adapted for all purposes, especially in Palestine.

2. Distribution throughout Australia.—As regards numbers, the State of New South Wales, the earliest settled of the group, established a lead, which it retained till the year 1914, when it gave place to Queensland, where rapid progress had been in evidence during the previous decade. New South Wales regained the lead during the next three seasons, but Queensland again replaced the latter State in 1918, and maintained its position until the recent drought which has seriously depleted its stocks.

Particulars of the several States for the past five years are as follows :—

HORSES.—NUMBER, 1922 TO 1926.

Year.	N.S.W. (a)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	F.C.T. (a)	Total.
1922	658,686	494,947	713,015	*a*264,150	181.159	37,313	39,845	1,345	2,390,460
1923	656,939	486,075	660,387	*a*258,489	181,944	37,570	44,603	1,433	2.327,440
1924	646,110	473,236	659,023	255,022	175,116	37,091	45,059	1,393	2.292,050
1925	649,534	463,051	637,436	244,111	170,563	37,785	46,380	1,501	2,250,361
1926	622,009	447,988	570,690	234,352	166,463	36,830	42,801	1,383	2,122,516

(*a*) 30th June year following.

The number of horses attained its maximum in Australia during 1918, when 2,527,149 were recorded. Since that date, however, a gradual decline has taken place in all divisions of the Commonwealth, except Northern Territory, the decrease for Australia during the period amounting to 404,633.

Particulars regarding the number of horses in Australia from 1860 onwards, may be ascertained from the graph herein.

3. Proportions in the Several States and Territories.—The percentages of the number of horses in the several States and Territories on the total for Australia for the past five years are as follows :—

HORSES.—PERCENTAGE IN EACH STATE, 1922 TO 1926.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	F.C.T.	Total.
	%	%	%	%	%	%	%	%	%
1922 ..	27.55	20.70	29.83	11.05	7.58	1.56	1.67	0.06	100.00
1923 ..	28.23	20.88	28.37	11.11	7.82	1.61	1.92	0.06	100.00
1924 ..	28.19	20.65	28.75	11.13	7.64	1.62	1.96	0.06	100.00
1925 ..	28.86	20.58	28.32	10.85	7.58	1.68	2.06	0.07	100 00
1926 ..	29.30	21.11	26.89	11.04	7.84	1.73	2.02	0.07	100.00

The relative changes in distribution are insignificant, the greatest alteration being a decrease of 3 per cent. in Queensland.

4. Relation to Population.—In proportion to population, horses are much more numerous in the Northern Territory than in any other of the principal divisions of Australia. Queensland is next in order, while Tasmania has the smallest number of horses per head. The number per head of population has declined in all the statistical divisions since 1922. Particulars for the past five years as follows :—

HORSES.—NUMBER PER HEAD OF POPULATION, 1922 TO 1926.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Fed. Cap. Ter.	All States.
1922 ..	0.30	0.31	0.90	0.51	0.53	0.17	11.22	0.41	0.42
1923 ..	0.30	0.30	0.81	0.49	0.51	0.17	12.55	0.39	0.40
1924 ..	0.29	0.29	0.79	0.47	0.48	0.17	12.60	0.46	0.39
1925 ..	0.28	0.27	0.74	0.44	0.46	0.17	12.69	0.38	0.38
1926 ..	0.26	0.26	0.65	0.41	0.44	0.17	10.98	0.28	0.35

5. **Comparison with other Countries.**—The number of horses in some of the leading horse-breeding countries of the world, according to the latest available returns, is as follows :—

HORSES.—NUMBER IN PRINCIPAL COUNTRIES.

Country.	Date.	Number of Horses (,000 omitted.)	Country.	Date.	Number of Horses (,000 omitted.)
Soviet Republics ..	1926	26,365	Union of South Africa	1925	815
U.S. of America ..	1926	15,279	Czecho-Slovakia ..	1925	740
Argentine Republic..	1922	9,432	Dutch East Indies..	1925	730
Brazil	1920	5,254	Sweden	1920	728
China	1916	4,401	Cuba	1925	684
Germany	1926	3,873	Turkey	1926	639
Canada	1926	3,559	Spain	1924	634
Poland	1921	3,290	Denmark ..	1926	548
France	1926	2,894	Lithuania ..	1926	535
India (British and Native)	1925	2,200	Uruguay ..	1924	510
Australia	**1926**	**2,123**	Paraguay ..	1918	490
Rumania	1926	1,877	Finland	1926	400
Japan	1925	1,553	Bulgaria	1920	398
United Kingdom ..	1926	1,403	Irish Free State ..	1926	379
Jugo-Slavia ..	1926	1,117	Latvia	1926	365
Italy	1919	990	Netherlands ..	1921	364
Colombia	1926	980	Chile	1925	324
Mexico	1926	964	New Zealand ..	1926	315
Hungary	1926	885	Philippine Islands..	1924	314

NOTE.—In some of the above countries only the horses on farms are enumerated.

6. **World's Totals.**—Several countries do not issue annual statistics of live stock, the information available consisting of censuses or estimates made at varying intervals. It is not possible, therefore, to give world aggregates for the different classes of stock year by year, nor to make a satisfactory comparison between the totals for consecutive years. In order, however, to give some idea of the latest position as regards live stock and the changes that have taken place as compared with pre-war years, the following information has been taken from the report issued by the International Institute of Agriculture. The list of countries included is fairly complete, but China, which possesses large numbers of horses, is omitted, as also are certain parts of Asiatic Russia, together with a few other countries. While for some countries the figures are the result of careful enumeration, in the case of others they are merely approximations. The

totals, therefore, can be regarded as a general indication only of the position at the dates shown. The figures for horses are as follows:—

HORSES.—WORLD'S TOTALS, 1913 AND 1926.

Continents, &c.	Number at the date nearest—		Increase (+) or Decrease (−) in 1926.	
	1913.	1926.	Actual Figures.	Percentages.
	,000	,000	,000	%
Europe	46,620	42,387	−4,233	−9.1
North and Central America	26,133	21,385	−4,748	−18.2
South America	18,162	17,696	−466	−2.6
Asia	12,457	12,025	−432	−3.5
Africa	1,689	2,056	+367	+21.7
Oceania	2,968	2,592	−376	−12.7
Total	108,029	98,141	−9,888	−9.2

Compared with the pre-war totals reductions have taken place in all the continents, with the exception of Africa, where the number of horses is relatively insignificant. The greatest decrease occurred in North and Central America, viz.:—4,748,000, largely as the result of the decline in the United States.

7. Oversea Trade in Horses.—(i) *Exports.* Australia's export trade in horses is not nearly as large as formerly, and is somewhat fluctuating. During the past five years it has varied in number between 5,619 in 1926–27 and 1,785 in 1923–24, and in value between £160,714 in 1924–25 and £59,799 in 1923–24. The total number of horses exported during the five years amounted to 21,828, valued at £603,255, or equal to an annual average of 4,366 for £120,651. The average export price for the period was £27 12s. 8d. Nearly 81 per cent. of the horses exported went to India, where they are largely used for remount purposes.

(ii) *Imports.* The number of horses imported into Australia is comparatively small, consisting mainly of valuable animals introduced for breeding purposes, principally from the United Kingdom and New Zealand. The average value per head of the horses imported during the last five years was £333 14s. 3d., as compared with £27 12s. 8d. per head for the exports for the same period. The average number imported per annum was, however, only 334, and the average annual value, £111,460. The following table gives the imports, exports, and net exports of horses during each of the years from 1922–23 to 1926–27:—

HORSES.—IMPORTS AND EXPORTS, AUSTRALIA, 1922–23 TO 1926–27.

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
		£		£		£
1922–23	309	81,685	3,854	109,663	3,545	27,978
1923–24	307	96,540	1,785	59,799	1,478	− 36,741
1924–25	356	132,652	4,960	160,714	4,604	28,062
1925–26	355	135,124	5,610	126,469	5,255	− 8,655
1926–27	343	111,297	5,619	146,610	5,276	35,313

NOTE.—The minus sign — signifies net imports.

§ 3. Cattle.

1. **Purposes for which Raised.**—In all the States, cattle-raising is carried out on a more or less extensive scale, the main objects in certain districts being the production of stock suitable for slaughtering purposes, and in others the raising of profitable dairy herds. The great impetus which the development of the export trade in Australian butter gave to the dairying industry led to a considerable increase in numbers and improvement in quality of the dairy herds in Victoria, New South Wales, and Southern Queensland in particular, the portion of Australia in the temperate zone being the best adapted to this industry. On the other hand, by far the finest specimens of beef-producing cattle are those raised in the tropical districts, *i.e.*, in the northern parts of Queensland, in the Northern Territory, and in the Kimberley districts in the north of Western Australia.

2. **Distribution throughout Australia.**—Until 1880 New South Wales occupied the leading position as a cattle-raising State, but in that year Queensland took first place, which it has since maintained. The graph herewith shows a rapid increase in the number of cattle in Australia up to the year 1894, when 12,311,617 head were depastured. From 1895 onwards, however, the effects of droughts and the ravages of tick fever reduced the number to 7,062,742 in 1902. Following the disastrous drought which terminated in the latter year, the herds were gradually built up, and despite recurring droughts, they continued to increase in recent years until the maximum number of 14,441,309 cattle was attained in 1921. The decline in the frozen beef trade and the droughts of 1922–23 and 1925–26, which particularly affected the beef cattle areas of New South Wales and Queensland, were mainly responsible for the heavy decreases recorded in both these States during the past five years. Preliminary figures available for certain of the States reveal further decreases during 1927.

The numbers of cattle in the several States and Territories during each of the last five years are as follows :—

CATTLE.—NUMBER, 1922 TO 1926.

Year.	N.S.W. (*a*)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter. (*a*)	Total.
1922	3,244,905	1,785,660	6,955,463	(*a*)425,811	939,596	218,197	760,766	6,275	14,336,673
1923	2,932,437	1,591,367	6,396,514	(*a*)413,272	953,764	220,351	843,718	6,085	13,357,508
1924	2,871,196	1,605,554	6,454,653	400,423	891,564	225,740	855,285	5,058	13,309,473
1925	2,931,818	1,513,787	6,436,645	373,597	835,911	212,373	970,342	5,312	13,279,785
1926	2,813,144	1,435,761	5,464,845	340,007	827,303	213,112	863,597	5,509	11,963 278

(*a*) 30th June year following.

3. **Proportion in each State.**—Percentages showing the relative importance of the various cattle-breeding States during the years 1922 to 1926 are given hereunder :—

CATTLE.—PERCENTAGE IN EACH STATE, 1922 TO 1926.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Total.
	%	%	%	%	%	%	%	%	%
1922 ..	22.63	12.46	48.52	2.97	6.55	1.52	5.31	0.04	100.00
1923 ..	21.95	11.91	47.89	3.09	7.14	1.65	6.32	0.05	100.00
1924 ..	21.57	12.06	48.50	3.01	6.70	1.69	6.43	0.04	100.00
1925 ..	22.08	11.40	48.47	2.81	6.29	1.60	7.31	0.04	100.00
1926 ..	23.51	12.00	45.68	2.84	6.92	1.78	7.22	0.05	100.00

Queensland contains within its borders nearly one half of the cattle-herds of Australia. Despite decreases during recent years the percentage of cattle in Queensland on the total for Australia amounted to 45.68 in 1926. The largest relative gain since 1922 occurred in the Northern Territory, the only statistical division in which the number of cattle has increased during the past four years.

4. Relation to Population.—The number of cattle per head of population varies considerably in the several States, as may be seen from the following table :—

CATTLE.—NUMBER PER HEAD OF POPULATION, 1922 TO 1926.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	All States.
1922 ..	1.48	1.12	8.82	0.82	2.73	1.00	214.24	1.93	2.54
1923 ..	1.32	0.98	7.89	0.78	2.70	1.01	237.33	1.65	2.31
1924 ..	1.27	0.97	7.73	0.74	2.45	1.03	237.75	1.69	2.27
1925 ..	1.28	0.90	7.47	0.68	2.24	0.98	265.41	1.35	2.22
1926 ..	1.20	0.84	6.19	0.60	2.18	0.99	221.55	1.12	1.96

5. Comparison with other Countries.—In the following comparison of the herds of Australia with those of some of the principal cattle-raising countries of the world, the latest available figures have been inserted in each case :—

CATTLE.—NUMBER IN VARIOUS COUNTRIES.

Country.	Date.	No. of Cattle (,000 omitted).	Country.	Date.	No. of Cattle (,000 omitted).
India (British and Native	1925	149,189	Czecho-Slovakia ..	1925	4,691
U.S. of America ..	1926	57,521	French Equatorial and West Africa ..	1924	4,539
Soviet Republics ..	1926	53,165	Cuba	1925	4,512
Argentine Republic ..	1922	37,065	Tanganyika Territory	1926	4,472
Brazil	1920	34,271	Dutch East Indies ..	1925	4,343
Germany	1926	17,133	Siam	1926	4,014
China	1921	15,973	Irish Free State ..	1926	3,947
France	1926	14,482	Jugo-Slavia ..	1926	3,706
Australia	**1926**	**11,963**	Spain	1924	3,436
Union of South Africa	1925	9,738	New Zealand ..	1926	3,452
Canada	1926	9,160	Kenya	1926	3,413
Uruguay	1924	8,432	Nigeria	1926	3,162
United Kingdom ..	1926	8,117	Japan	1924	3,157
Poland	1921	8,063	Denmark	1926	2,838
Madagascar	1925	7,659	Sweden	1920	2,737
Turkey	1926	6,537	Rhodesia	1926	2,552
Colombia	1926	6,500	Bolivia	1926	2,320
Italy	1919	6,239	Venezuela	1922	2,278
Paraguay	1918	5,500	Austria	1923	2,162
Mexico	1926	5,121	Netherlands ..	1921	2,063
Rumania	1926	4,798			

6. World's Totals.—The information in the appended table has been taken from the returns published by the International Institute of Agriculture at Rome. The figures given therein are subject to the limitations previously noted in respect to horses (See § 2, 6 *ante.*)

CATTLE.—WORLD'S TOTALS, 1913 AND 1926.

Continents, etc.	Number at the date nearest—		Increase (+) or Decrease (−) in 1926.	
	1913.	1926.	Actual Figures.	Percentages.
	,000	,000	,000	%
Europe	137,861	139,477	+ 1,616	+ 1.2
North and Central America	74,336	81,467	+ 7,131	+ 9.6
South America	86,662	101,051	+14,389	+16.6
Asia	142,087	154,356	+12,269	+ 8.6
Africa	33,174	47,926	+14,752	+44.5
Oceania	13,856	15,773	+ 1,917	+13.8
Total	487,976	540,050	+52,074	+10.7

The number of cattle has increased in all continents since 1913, the most notable advances being in Africa and South America. In the latter continent the development of the cattle industry has been most marked in the Argentine Republic, the number of cattle recorded in that country increasing by more than 11,000,000 head since the pre-war year.

7. Imports and Exports of Cattle.—Although the various products of the cattle-raising industry bulk largely in the export trade of Australia, the export of live cattle has never been considerable. The number of cattle imported is also small, consisting, as in the case of horses, mainly of valuable animals for the purpose of breeding. Details are as follows :—

CATTLE.—IMPORTS AND EXPORTS, AUSTRALIA, 1922-23 TO 1926-27.

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
		£		£		£
1922–23 ..	147	18,856	13,965	83,587	13,818	64,731
1923–24 ..	2,683	46,684	2,612	15,254	—71	—31,430
1924–25 ..	70	2,318	9,744	45,946	9,674	43,628
1925–26 ..	173	15,743	10,071	48,375	9,898	32,632
1926–27 ..	103	4,412	10,196	48,075	10,093	43,663

NOTE.—The minus sign — signifies net imports.

The importation of fat cattle from New Zealand for the Melbourne market was the cause of the relatively large import in 1923–24. Omitting these unusual shipments the average value of the cattle imported during the last five years was £88 12s. 10d. per head. while the average value of the cattle exported during the same period was £5 3s. 7d, As previously stated, the imported cattle were required principally for stud purposes.

8. Cattle Slaughtered.—The number of cattle slaughtered during each of the years 1922 to 1926 is given hereunder :—

CATTLE (INCLUDING CALVES) SLAUGHTERED, 1922 TO 1926.

Year.	N.S.W. (a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas. (a)	N. Ter.	Fed. Cap. Ter. (a)	Total.
1922	738,908	424,199	504,394	a127,294	79,823	31,026	1,587	142	1,907,373
1923	752,376	461,958	566,452	a140,979	90,833	33,729	2,500	113	2,048,940
1924	818,683	499,840	893,169	155,050	95,648	36,154	6,630	143	2,505,317
1925	825,628	523,960	778,060	157,210	110,286	36,824	2,000	456	2,434,424
1926	809,810	499,519	567,640	143,747	101,948	32,989	1,369	2,784	2,159,806

(a) For year ended 30th June of year following.

9. Production and Consumption of Beef.—The production of beef in Australia during the three years ended 1926–27 was estimated at 1,199,536,900 lbs. per annum. The requirements of the local market absorbed 989,603,833 lbs., approximately 82½ per cent. leaving a balance of 17½ per cent., which was exported as frozen and canned beef. The annual consumption of beef per head of population in Australia averaged 165 lbs. compared with 70 lbs. in the United States of America, 70 lbs. in Canada, and 64 lbs. in the United Kingdom for the same period.

10. Export of Beef Preserved by Cold Process.—The establishment of the frozen meat export trade about the year 1882 provided an outlet for the surplus stock of

Australia, and since that date the trade in frozen beef has grown to large proportions, the quantities exported during the five years 1922–23 to 1926–27 being as follows :—

BEEF PRESERVED BY COLD PROCESS.—EXPORTS, AUSTRALIA, 1922–23 TO 1926–27.

Country to which Exported.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.	Total for 5 years.
			Quantity.			
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
United Kingdom ..	112,316,545	62,286,753	175,276,049	124,287,414	64,683,188	538,849,949
Belgium	2,452,475	7,728,342	25,679,301	31,760,595	9,749,733	77,370,446
Italy	67,315	8,511,922	48,938,055	11,764,463	1,920,928	71,202,683
Germany.. ..	17,321,705	5,437,988	6,777,898	15,600,259	4,114,891	49.252,741
Philippine Islands	4,780,134	8,442,695	8,117,712	9,201,185	9,232,659	39,774,385
Egypt	5,228,357	3,242,520	6,406,583	4,919,222	6,592,505	26,389,187
Malta	1,223,563	2,007,894	3,006,897	3,987,758	3,320,951	13,547,063
Malaya (British) ..	2,215,561	1,908,621	2,012,101	2.062,674	2,211,299	10,410.256
France	1,802,192	625,223	2,909,841	3,262.353	341,423	8,941,032
Hawaiian Islands ..	2,089,605	230,274	996,735	2,942,684	2,287,908	8,547,206
Hong Kong ..	511,417	1,444,881	382,390	1,370,380	1,977,457	5,686.525
Gibraltar.. ..	353,354	1,254,888	929,137	1,432.295	813,149	4,782.823
Japan	398,301	884,679	981,672	450,557	1,535,490	4,250,699
Netherlands East Indies	849,313	378,015	254.777	368,333	401,829	2,252,267
Ceylon	456,739	319,546	309,781	428,357	564,347	2,078,770
Other Countries ..	884,091	459,699	641,758	251,452	2,450,339	4,687,339
Total ..	152,950,667	105,163,940	283,620,687	214,089,981	112,198.096	868,023,371
			Value.			
	£	£	£	£	£	£
United Kingdom ..	1,285,049	734,814	2,552,775	1.915,739	916,291	7,404,668
Belgium	27,314	96,270	366,488	487,448	131,172	1,108.692
Italy	842	115,819	725,510	170,829	26.905	1,039.905
Germany.. ..	202,119	65,054	105,496	225,063	57.594	655,326
Philippine Islands	60,843	105,971	103,781	124.010	128.160	522,765
Egypt	67,684	45,858	93,805	80,722	106,018	394,087
Malta	14,265	30,658	46,872	62,753	54,095	208.643
Malaya (British) ..	34,552	28,980	32,496	33,927	38.866	168.821
Hawaiian Islands ..	28,412	3,955	16,386	46,325	38.525	133.603
France	21,720	7,101	44,539	45,871	4,979	124,210
Hong Kong ..	6,771	19,537	5,567	23,365	31,104	86,344
Gibraltar.. ..	4,214	14,853	15,458	24,997	13,213	72,735
Japan	5,340	12,603	10,806	4,772	20,567	54,088
Ceylon	8,455	6,405	5,868	8,324	11,028	40,080
Netherlands East Indies .. .	14,041	7,168	3,586	5,835	7,163	37,793
Other Countries ..	13,114	6,823	10,654	4,940	42,318	77,859
Total ..	1,794,735	1,301,879	4,140,087	3,264,920	1,627,998	12,129,619

The export trade in frozen beef during 1926–27 was far from satisfactory. Owing to the drought in Queensland and depressed markets overseas beef shipments were only half those of the previous year. The largest purchaser of Australian beef is the United Kingdom, which during the five years ended 1926–27 took £7,404,668 worth, or more than 61 per cent. of the total shipments. The continental demand which had been a feature of the two previous seasons declined considerably in 1926-27. Difficulties of exchange and increases in home-grown supplies contributed to this loss of trade.

11. **Beef Subsidy.**—Particulars of the efforts of the Commonwealth Government to assist the beef industry by the passage of the Meat Export Bounties Act and the operations of that measure are contained in previous issues of the Year Book.

§ 4. Sheep.

1. **Initiation of the Pastoral Industry.**—Fortunately for Australia, the suitability of its climate and general conditions for the production of a high class of wool was, at an early date in the history of its settlement, surmised and tested by Captain Macarthur, one of the pioneer sheep-breeders of New South Wales. To the energy of this enterprising pastoralist is due in large measure the rapid and extremely satisfactory development of Australia as a producer of fine wool, and, while it would appear that the introduction of the merino sheep into Australia was not due to Macarthur, a great deal of the credit for having successfully established the pastoral industry in Australia must certainly be his.

2. Distribution throughout Australia.—With the exception of a short period in the early sixties, when the flocks of Victoria outnumbered those of the mother State, New South Wales has maintained the lead in sheep-raising which naturally attached to it as the portion of Australia in which settlement was first effected. Within its borders are contained generally one half of the flocks of Australia, and in the returns for the past two years even this high percentage was exceeded.

Fluctuations in the number of sheep recorded for each year in Australia from 1860 onwards may be seen from the graph accompanying this chapter. Five marked periods of decline depleted the numbers at successive intervals, but these gaps were as quickly restored, and, despite a decrease of 3½ millions during the drought of 1922, the number reported in 1926 was 104,267,101, the greatest number since the maximum year 1891, when 106,421,068 sheep were depastured. This development in spite of the annual slaughter of some ten to twelve million sheep and lambs for the mutton and lamb trade is a striking commentary on the soundness of the sheep and wool industry, and on the excellent seasons experienced in Australia during recent years.

Preliminary advices estimate the sheep total at 31st December, 1927, at 99,357,738. The decline was practically confined to New South Wales, where dry conditions and the requirements of other States reduced the flocks of that State by nearly 6,000,000.

The number of sheep in the several States and Territories for each year from 1922 to 1926 was as follows :—

SHEEP.—NUMBER, 1922 TO 1926.

Year.	New South Wales. (a)	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Nor. Ter.	Fed. Cap.Ter. (a)	Total.
1922	38,605,391	11,765,520	17,641,071	a6,305,133	6,664,135	1,558,494	6,161	154,609	82,700,514
1923	41,293,843	11,059,761	16,756,101	a6,596,875	6,595,867	1,557,716	4,728	146,157	84,011,048
1924	46,934,210	12,649,898	19,028,252	6,359,240	6,396,564	1,614,085	6,914	165,790	93,154,953
1925	53,687,749	13,740,500	20,663,323	6,810,495	6,861,795	1,619,075	8,030	172,251	103,563,218
1926	55,705,923	14,919,653	16,860,772	7,283,945	7,458,766	1,807,558	6,407	224,077	104,267,101

(a) 30th June, year following.

3. Proportion in the Several States and Territories.—Particulars concerning the relative positions of the several States and Territories with respect to the total flocks of Australia during the years 1922 to 1926 are given hereunder :—

SHEEP.—PERCENTAGE IN EACH STATE, 1922 TO 1926.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Fed. Cap. Ter.	Total.
	%	%	%	%	%	%	%	%	%
1922 ..	46.68	14.23	21.33	7.62	8.06	1.88	0.01	0.19	100.00
1923 ..	49.15	13.16	19.95	7.85	7.85	1.86	0.01	0.17	100.00
1924 ..	50.38	13.58	20.42	6.83	6.87	1.73	0.01	0.18	100.00
1925 ..	51.84	13.27	19.95	6.58	6.62	1.56	0.01	0.17	100.00
1926 ..	53.43	14.31	16.17	6.99	7.15	1.73	0.01	0.21	100.00

Apart from the effect of drought the percentage of sheep depastured in the different States shows little change. The most noteworthy alteration was a gain of 6.75 per cent. in New South Wales mainly at the expense of Queensland.

4. Relation to Population.—The relation of the flocks of the several States and Territories to the population at the end of each year from 1922 to 1926 is as follows:—

SHEEP.—NUMBER PER HEAD OF POPULATION, 1922 TO 1926.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Fed. Cap. Ter.	Total.
1922 ..	17.77	7.40	22.38	12.20	19.39	7.12	1.74	60.46	14.68
1923 ..	18.69	6.80	20.66	12.47	18.64	7.11	1.33	55.74	14.61
1924 ..	20.82	7.64	22.79	11.81	17.57	7.34	1.92	55.30	15.86
1925 ..	23.36	8.16	23.99	12.35	18.44	7.46	2.20	43.76	17.28
1926 ..	23.73	8.72	19.11	12.86	19.69	8.42	1.64	45.53	17.06

5. Comparison with other Countries.—As regards the size of its flocks, and the quantity and quality of wool produced, Australia has long occupied the leading position amongst the sheep-raising countries of the world. The following comparison taken mainly from the Year Book of the International Institute of Agriculture gives the latest figures relative to the number of sheep in the principal wool-producing countries:—

SHEEP.—NUMBER IN VARIOUS COUNTRIES.

Country.	Date.	No. of Sheep (,000 omitted).	Country.	Date.	No. of Sheep (,000 omitted).
Australia	**1926**	**104,267**	Jugo-Slavia ..	1926	7,932
Soviet Republics ..	1926	89,707	Algeria	1926	6,786
U.S. of America ..	1926	41,909	French Equatorial and West Africa ..	1925	6,684
India (British and Native)	1925	36,817	Greece	1923	5,643
Argentine Republic ..	1922	36,209	Iraq (*a*)	1926	5,055
Union of South Africa	1925	35,570	Tanganyika Territory(*a*)	1926	4,462
New Zealand ..	1926	24,905	Bolivia	1926	4,220
United Kingdom ..	1926	24,592	Chile	1925	4,094
China	1916	22,232	Germany	1926	4,080
Spain	1924	18,460	Portugal	1920	3,851
Uruguay	1924	14,443	Irish Free State ..	1926	3,003
Rumania	1926	13,582	Canada	1926	2,877
Italy	1919	11,754	Kenya	1926	2,756
Turkey	1926	11,702	Mexico	1926	2,381
Peru	1922	11,335	Poland	1921	2,193
France	1926	10,775	Basutoland ..	1926	2,100
French Morocco ..	1926	9,248	Sudan (Anglo-Egyptian)	1926	2,000
Bulgaria	1920	8,923			
Brazil	1920	7,933			

(*a*) Including goats.

6. World's Totals.—The number of sheep in the various great divisions of the world has been estimated by the International Institute of Agriculture, and a comparison has been made with pre-war estimates. In the table below the results are shown, the totals being subject to the limitations noted for other classes of live stock. (See § 2, 6 *ante*).

SHEEP.—WORLD'S TOTALS, 1913 AND 1926.

Continents, etc.	Number at the date nearest—		Increase (+) or Decrease (−) in 1926.	
	1913.	1926.	Actual Figures.	Percentages.
	,000	,000	,000	%
Europe	191,671	194,916	+ 3,245	+ 1.7
North and Central America	55,083	48,052	− 7,031	−12.8
South America	100,392	81,144	−19,248	−19.2
Asia	57,987	66,340	+ 8,353	+14.4
Africa	74,260	82,288	+ 8,028	+10.8
Oceania	109,331	128,507	+19,176	+17.5
Total	588,724	601,247	+12,523	+2.1

Despite large reductions in the United States, Argentine, Brazil, and Uruguay the total number of sheep recorded in 1926 exceeded that depastured in the various countries during 1913. The increase was mainly due to important additions to the flocks of Australia, Africa, and Asia.

7. Oversea Imports and Exports of Sheep.—As in the case of cattle, the oversea exports of live sheep from Australia are of comparatively small importance. During the past five years the principal consignments of ordinary sheep have been made to Malaya (British) from the State of Western Australia. The purchases by South African and Japanese buyers at the Australian Stud Sheep Sales during recent years have opened up a regular export trade with these two countries in stud sheep, the bulk of which has been secured from the leading flocks of New South Wales, Victoria and South Australia. The following are particulars of the imports and exports for the years 1922–23 to 1926–27 :—

SHEEP.—IMPORTS AND EXPORTS, AUSTRALIA, 1922–23 TO 1926–27.

Year.	Imports.		Exports.		Net Exports.	
	No.	Value.	No.	Value.	No.	Value.
		£		£		£
1922–23 ..	235	3,378	38,194	45,395	37,959	42,017
1923–24 ..	1,021	8,487	31,323	49,374	30,302	40,887
1924–25 ..	2,183	10,902	6,326	40,695	4,143	29,793
1925–26 ..	2,375	13,873	22,706	41,831	20,331	27,958
1926–27 ..	6,951	34,595	33,169	49,985	26,218	15,390

8. Sheep Slaughtered.—The number of sheep slaughtered in the several States during each of the years from 1922 to 1926 was as follows :—

SHEEP (INCLUDING LAMBS) SLAUGHTERED, 1922 TO 1926.

Year.	N.S.W. (*a*)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas. (*a*)	Nor. Ter.	Fed. Cap. Ter.(*a*)	Total.
1922 ..	5,662,953	5,863,195	762,540	*a*1,290,669	900,128	344,989	..	3,323	14,827,797
1923 ..	3,614,457	4,078,273	618,127	*a*956,140	809,379	316,438	..	2,898	10,395,712
1924 ..	3,396,957	3,591,219	446,247	933,426	588,577	276,117	..	2,989	9,235,532
1925 ..	4,244,497	4,194,572	635,335	1,028,533	613,935	286,691	..	7,908	11,011,471
1926 ..	5,600,083	4,528,113	679,266	1,090,756	712,647	310,428	..	19,319	12,940,612

(*a*) Year ended 30th June year following.

9. Production and Consumption of Mutton and Lamb.—The annual production of mutton and lamb during the three years ended 1926–27 averaged 443,471,123 lbs., of which 363,663,709 lbs., or 82 per cent., was consumed locally, leaving a balance of 18 per cent. for exportation. The consumption of mutton and lamb in Australia during the same period averaged 61 lbs. per head per annum, a figure considerably in excess of the per capita consumption during the past three years in the following countries :—United Kingdom, 27 lbs. ; Canada, 6 lbs. ; and United States of America, 5½ lbs.

10. Exports of Mutton and Lamb Preserved by Cold Process.—The export trade in mutton and lamb preserved by cold process grew rapidly until in 1913, the year immediately before the war, the value of the shipments amounted to nearly £3,000,000. The exports fell away considerably during the war years, but a record shipment of 246,971,346 lbs., valued at £5,482,564, was made in 1919–20, and another large consignment was dispatched in 1922–23. Climatic conditions favoured a considerable output in the next four seasons, but shipments were not large in comparison, owing chiefly to the sound position of wool and depressed markets overseas.

As in the case of frozen beef, the principal customer in this trade is the United Kingdom, which absorbed nearly 95 per cent. of the total quantity exported from Australia during the last five years, while the balance was shipped mainly to Malaya (British), Egypt, Hong Kong, Ceylon, Canada, and Malta.

MUTTON AND LAMB PRESERVED BY COLD PROCESS.—EXPORTS, AUSTRALIA, 1922–23 TO 1926–27.

Country to which Exported.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.	Total for 5 years.
			QUANTITY.			
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
United Kingdom ..	162,653,301	35,996,594	46,025,699	80,584,284	88,056,762	413,316,640
Malaya (British) ..	1,106,778	846,641	1,072,104	994,153	1,033,736	5,053,412
Egypt	984,473	463,332	739,176	617,805	338,843	3,143,629
Hong Kong	432,250	491,660	446,076	601,292	439,373	2,410,651
Canada	203,315	251,046	216,121	545,043	1,229,936	2,445,461
Ceylon	340,484	415,729	443,937	411,241	468,406	2,079,797
Malta	..	..	..	707,093	642,839	1,349,932
Philippine Islands ..	208,910	184,482	167,118	154,014	135,426	849,950
Hawaiian Islands ..	..	..	..	416,307	390,705	807,012
France	..	..	..	342,908	514,702	857,610
Union of South Africa ..	179,226	156,102	..	..	51,770	387,098
Other Countries ..	1,503,824	999,763	1,161,231	307,830	217,656	4,190,304
Total	167,612,561	39,805,349	50,271,462	85,681,970	93,520,154	436,891,496
			VALUE.			
	£	£	£	£	£	£
United Kingdom ..	4,205,189	1,067,571	1,397,291	2,298,400	1,942,956	10,911,407
Malaya (British) ..	28,531	25,067	34,548	27,964	24,260	140,370
Egypt	18,825	11,021	20,781	15,226	6,067	71,920
Hong Kong	12,104	14,969	14,144	16,269	9,142	66,628
Canada	3,944	6,216	6,503	15,210	30,034	61,907
Ceylon	8,872	12,296	14,018	10,751	9,522	55,459
Malta	..	..	..	15,158	11,002	26,160
Philippine Islands ..	5,740	5,486	5,556	4,526	2,893	24,201
Hawaiian Islands ..	..	..	..	13,620	10,101	23,721
France	..	..	..	6,430	7,153	13,583
Union of South Africa ..	3,710	4,167	..	..	576	8,453
Other Countries ..	35,002	24,057	29,241	6,911	3,901	99,112
Total	4,321,917	1,170,850	1,522,082	2,430,465	2,057,607	11,502,921

§ 5. Wool.

1. **General.**—Australia is the leading wool-growing country in the world. With less than one-sixth of the world's sheep Australia produced in 1926–27 26½ per cent., or more than one-quarter of the world's supply. Her contribution was even more important as it represented one-half of the world's production of fine quality merino wool. The bulk of the production is exported, but with the greater activity of Australian woollen mills the quantity used locally is increasing, nevertheless the amount so used represents about 6 per cent. only of the total production.

2. **Value.**—Wool is the chief factor in the pastoral wealth of Australia and the Nation's prosperity is largely dependent upon the satisfactory sale of its annual wool clip. Based upon the export values of the produce of the various States the output for the season 1926–27 was valued at £74,080,000, compared with £61,633,000 in the previous year, £81,430,000, in the record price year 1924–25, and £60,878,000 the average of the previous five seasons. During the period 1921–22 to 1925–26 the export of wool averaged 45.6 per cent. of the value of the total shipments of merchandise from Australia, and in 1926–27 the ratio increased to 46.9 per cent.

3. Greasy and Scoured Wool.—For the purpose of comparing the clips as a whole for a series of years, it is convenient to have the total production expressed in terms of greasy wool.

The quantity of Australian wool scoured and washed before export during recent years has been on the average about 17 per cent. of the total quantity shipped. The loss of weight in scouring varies largely with season, locality, breed, and condition. It seems preferable to express "scoured and washed" wool in terms of "greasy" rather than vice versa, since the absolute error arising from uncertainty as to average loss of weight is thereby minimized.

In the tables dealing with production, "scoured and washed" wool has been converted into the estimated equivalent amount of "greasy" on the assumption that two and one-sixth pounds of "greasy" wool are on the average required to produce one pound of "scoured and washed."

4. Production.—(i) *Quantity.* The annual shearing of the live sheep provides the main source of Australia's wool supply, the resultant clip forming about 89 per cent. of the total production. A considerable quantity, approximately 6½ per cent. of the total output is obtained by fellmongering, or removing wool from skins of slaughtered sheep, while the remaining 4½ per cent. is an estimation of the quantity of wool exported on sheepskins. Statistics of wool production are compiled from data received from growers, fellmongers, etc. As the result of recent investigations made in some of the States serious understatements by landholders have been disclosed, and it is believed that this practice is general throughout the Commonwealth. Exhaustive inquiries have enabled the Statisticians of the States referred to satisfactorily to revise their original figures, and provisional amendments have been inserted pending similar action in the remaining States. The following table furnishes the revised figures for each State and the Commonwealth during the past five seasons :—

WOOL.—TOTAL PRODUCTION, 1922–23 TO 1926–27.

State.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	lbs.	lbs.	lbs.	lbs.	lbs.
New South Wales(*a*) ..	336,899,000	303,032,000	369,118,000	402,490,000	499,322,000
Victoria	127,467,950	107,513,361	133,484,871	139,076,017	151,624,526
Queensland	144,971,150	131,913,075	152,131,544	158,744,544	129,435,804
South Australia ..	58,698,738	57,881,936	62,438,953	69,007,266	72,365,200
Western Australia ..	45,139,138	49,055,393	44,307,052	48,547,780	59,300,023
Tasmania	12,218,550	11,712,273	12,483,452	12,564,000	12,333,000
Northern Territory(*b*)	20,000	20,000	20,000	30,000	30,000
Total ..	725,414,526	661,128,038	773,983,872	830,459,607	924,410,553

(*a*) Including Federal Capital Territory. (*b*) Approximate figures.

(ii) *Estimate for* 1927–28. Although the returns are not yet complete the total wool production of the Commonwealth during 1927–28 is officially estimated at 880,000,000 lbs., valued at approximately £74,993,000.

5. Care Needed in Comparing Clips.—In comparing successive clips, allowance must be made for the circumstance that, owing to climatic or other conditions, the time of shearing may be so far delayed that one clip may include almost thirteen months' growth of wool, while the succeeding one may include little more than eleven months' growth.

6. World's Wool Production.—The following table compiled by the Textile Division of the United States Department of Commerce shows the importance of Australia as a wool-producing country. Out of a total production of 3,479,684,000 lbs. in 1927, Australia's contribution amounted to 924,411,000 lbs., or more than 26½ per cent. of the world's supply.

WOOL(*a*).—WORLD'S PRODUCTION, 1909 TO 1927.

Countries.	Average Annual Pre-War Production.(*b*)	Production.	
		1926.	1927.(*c*)
	lbs.	lbs.	lbs.
North America—			
United States	314,110,000	311,500,000	328,137,000
Canada	11,210,000	17,182,000	18,673,000
Mexico	7,000,000	5,250,000	2,000,000
Total	332,320,000	333,932,000	348,810,000
Central America and West Indies	1,000,000	750,000	750,000
South America—			
Argentine Republic ..	358,688,000	314,840,000	331,000,000
Brazil	35,000,000	22,597,000	26,386,000
Chile	17,430,000	31,000,000	35,000,000
Peru	9,940,000	10,000,000	10,000,000
Uruguay	156,968,000	125,000,000	130,000,000
All other	9,324,000	6,400,000	20,350,000
Total	587,350,000	509,837,000	552,736,000
Europe—			
Austria	15,360,000	1,700,000	1,200,000
Belgium	1,060,000	775,000	775,000
Bulgaria	23,700,000	25,450,000	22,000,000
Czecho-Slovakia	..	3,370,000	3,370,000
Denmark	3,508,000	1,102,000	3,180,000
Estonia	..	2,396,000	2,396,000
Finland	..	5,000,000	5,000,000
France	80,688,000	47,619,000	47,447,000
Germany..	52,000,000	41,710,000	38,500,000
Greece	14,000,000	14,500,000	17,500,000
Hungary	17,637,000	16,500,000	16,500,000
Iceland	1,980,000	1,433,000	(*d*)
Italy	55,000,000	55,800,000	55,800,000
Jugo-Slavia	25,446,000	28,727,000	37,400,000
Netherlands	3,556,000	6,173,000	3,960,000
Norway	8,160,000	5,976,000	6,232,000
Poland	7,100,000	4,500,000	4,300,000
Portugal	10,000,000	6,000,000	6,000,000
Rumania..	13,228,000	57,000,000	55,000,000
Russia	320,000,000	116,000,000	237,136,000
Spain	72,000,000	105,792,000	104,500,000
Sweden	2,875,000	2,200,000	2,200,000
Switzerland	1,049,000	660,000	660,000
Turkey	28,000,000	..	..
United Kingdom	134,000,000	98,785,000	117,676,000
Irish Free State	..	14,900,000	12,845,000
All other	..	9,670,000	7,842,000
Total	890,347,000	673,738,000	809,419,000

(*a*) Computed on "greasy" basis. (*b*) Average for years 1909 to 1913 inclusive. (*c*) Where 1927 figures were not obtainable, an earlier figure or an unofficial estimate has been inserted. (*d*) Included with Denmark.

WOOL(*a*).—WORLD'S PRODUCTION, 1909 TO 1927—*continued.*

Countries.	Average Annual Pre-War Production.(*b*)	Production.	
		1926.	1927.(*c*)
	lbs.	lbs.	lbs.
Asia—			
British India	60,000,000	55,000,000	55,000,000
China	50,000,000	60,000,000	60,000,000
Persia	12,146,000	18,000,000	18,000,000
Russia in Asia	60,000,000	79,000,000	79,500,000
Turkey in Asia	90,000,000	13,000,000	11,300,000
All other	1,000,000	33,072,000	51,972,000
Total	273,146,000	258,072,000	275,772,000
Africa—			
Algeria	35,221,000	30,659,000	36,800,000
British South Africa ..	165,888,000	190,000,000	240,000,000
Tunis	3,735,000	5,700,000	5,700,000
Morocco	14,850,000	38,650,000	38,650,000
All other	30,000,000	5,900,000	29,250,000
Total	249,694,000	270,909,000	350,400,000
Oceania—			
Australia..	741,377,000	833,739,000	924,411,000
New Zealand	198,474,000	207,801,000	202,386,000
Total	939,851,000	1,041,540,000	1,126,797,000
Total all other Countries ..	13,000,000	15,000,000	15,000,000
GRAND TOTAL ..	3,286,708,000	3,103,778,000	3,479,684,000

(*a*) Computed on "greasy" basis. (*b*) Average for years 1909 to 1913 inclusive. (*c*) Where 1927 figures were not obtainable, an earlier figure or an unofficial estimate has been inserted.

7. **Wool Locally Used.**—The quantity of wool used in the woollen and tweed mills of the various States during the past five years was approximately as follows :—

WOOL.—GREASY, USED IN LOCAL WOOLLEN, TWEED, AND TOP MILLS, 1922–23 TO 1926–27.

State.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	lbs.	lbs.	lbs.	lbs.	lbs.
New South Wales	16,903,380	14,547,744	12,798,722	15,332,166	15,394,828
Victoria	15,926,225	13,068,648	14,420,497	17,642,326	29,020,842
Queensland	1,358,888	1,317,521	1,102,110	2,192,482	3,373,800
South Australia	621,265	586,800	536,870		
Western Australia	..	..	..		
Tasmania	1,502,060	963,369	1,931,814	3,321,213	4,337,881
Total	36,311,818	30,484,082	30,790,013	38,488,187	52,127,351

The total consumption of wool in Australia cannot be accurately estimated, as particulars in respect of all wool-using establishments are not available. The figures given above, however, are furnished by the largest consumers, and reveal a steady increase during the past five years.

8. Exports of Wool.—(i) *Greasy—Quantities.* Of the total exports of wool expressed in terms of "greasy" shipped overseas during the past five years slightly more than 39 per cent. were sent to the United Kingdom, practically the same percentage as was dispatched in pre-war years. The other leading consignees since 1922–23 were France, Japan, Germany, Belgium, United States of America, and Italy, the principal continental countries taking 44½ per cent., and America and Japan 15½ per cent. of the total shipments. The following table shows for the years 1922–23 to 1926–27 the quantities of "greasy" wool exported, and the principal countries of destination :—

WOOL IN THE GREASE.—EXPORTS, AUSTRALIA, 1922–23 TO 1926–27.

Country to which Exported.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.	Total for 5 years.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
United Kingdom ..	259,230,707	163,169,820	175,937,327	256,078,293	211,874,803	1,066,290,950
France	137,742,458	121,268,001	114,676,170	224,052,949	174,426,470	772,166,048
Japan	50,043,561	45,455,153	53,015,265	59,595,292	78,913,977	287,023,248
Germany	32,940,661	31,422,309	39,595,031	65,802,691	97,808,703	267,569,395
Belgium	34,180,045	48,011,894	36,682,734	64,602,486	76,891,243	260,368,402
United States of America	50,234,655	31,909,668	38,501,358	61,317,978	41,446,243	223,409,902
Italy	28,646,259	25,143,698	28,752,441	34,173,784	28,185,823	144,902,005
Netherlands ..	3,017,462	14,091,947	2,977,389	1,472,172	1,090,882	22,649,852
India	296,164	1,598,944	770,543	193,292	448,275	3,307,218
Canada	1,184,321	697,794	483,127	461,719	338,045	3,165,006
Other Countries ..	807,697	1,196,811	875,712	1,353,614	925,744	5,159,578
Total ..	598,323,990	483,966,039	492,267,097	769,104,270	712,350,208	3,056,011,604

(ii) *Scoured and Washed—Quantities.* Similar particulars concerning the exports of "scoured and washed" wool were as follows :—

WOOL, SCOURED AND WASHED(*a*).—EXPORTS, AUSTRALIA, 1922–23 TO 1926–27.

Country to which Exported.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.	Total for 5 years.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
United Kingdom ..	75,505,841	24,664,470	27,181,826	32,481,422	30,113,626	189,947,185
France	13,533,782	8,451,562	5,609,547	9,452,561	10,078,990	47,126,442
Japan	6,435,286	5,010,121	3,462,119	6,484,570	5,002,337	26,394,433
Belgium	3,938,725	3,749,960	3,179,143	3,295,602	5,739,697	19,903,127
Germany	6,006,516	2,469,208	1,979,909	1,780,997	5,344,667	17,581,297
United States of America	4,588,736	449,143	713,661	1,087,828	305,374	7,144,742
Canada	823,238	582,580	441,424	506,608	320,900	2,674,750
Italy	1,005,988	490,020	413,878	808,316	294,957	2,513,159
Netherlands ..	577,066	957,687	18,995	28,470	..	1,582,218
India	13,513	233,934	212,006	8,395	1,816	469,664
Other Countries ..	345,876	297,967	448,554	601,259	534,329	2,227,985
Total ..	112,774,567	47,356,652	43,661,062	56,036,028	57,736,693	317,565,002

(*a*) Including "tops."

The figures for "scoured and washed wool" include tops, amounting in 1922–23 to 6,374,922lbs., valued at £1,412,683 ; in 1923–24, 4,988,258 lbs., valued at £1,161,920 ; in 1924–25, 4,090,958 lbs., valued at £1,119,849 ; in 1925–26, 5,953,442 lbs., valued at £1,162,877 ; and in 1926–27, 4,519,357 lbs., valued at £822,713. The total exports of wool tops during the last five years amounted to 25,926,937 lbs., valued at £5,680,042 of which 22,222,426 lbs., or more than 85 per cent., were shipped to Japan.

(iii) *Total Value of Exports.* The total value of the wool exported from Australia to the principal countries during the five years under review was :—

WOOL EXPORTS.—TOTAL VALUE, AUSTRALIA, 1922–23 TO 1926–27.

Country to which Exported.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.	Total for 5 years.
	£	£	£	£	£	£
United Kingdom	25,901,608	20,136,750	24,386,464	23,195,387	19,013,978	112,634,187
France	10,408,195	12,278,938	12,484,097	15,821,883	13,164,721	64,157,834
Japan	6,095,616	6,212,881	7,479,586	5,869,969	7,868,883	33,526,935
United States of America	5,618,652	4,323,239	5,926,430	6,076,012	4,080,960	26,025,293
Germany	3,448,031	3,576,436	4,929,589	5,034,599	7,920,677	24,909,332
Belgium	2,514,717	4,951,127	3,844,335	4,221,646	5,507,034	21,038,859
Italy	2,498,733	2,634,990	3,327,166	2,523,541	2,156,454	13,140,884
Netherlands	347,698	1,625,493	367,651	117,408	89,078	2,547,328
Canada	184,365	154,323	162,395	121,359	69,695	692,137
India	11,487	123,550	108,522	14,897	23,670	282,126
Other Countries ..	109,662	179,431	246,910	213,175	159,210	908,388
Total	57,138,764	56,197,158	63,263,145	63,209,876	60,054,360	299,863,303

9. **Average Export Value.**—The average values per pound of Australian wool according to the export returns for the year 1913 and for each of the past five years have been as follows :—

AUSTRALIAN WOOL.—EXPORT VALUE PER POUND 1913 TO 1927–28.

Description.	1913.	1923–24.	1924–25.	1925–26.	1926–27.	1927–28.
	d.	*d.*	*d.*	*d.*	*d.*	*d.*
Greasy	9.70	24.14	27.10	17.63	17.99	20.48
Scoured	17.27	36.03	39.81	26.57	26.25	31.87

10. **Exports and Local Sales of Wool, States, 1926–27.**—Wool selling in Australia has been developed to such a stage that practically all of the wool grown is now disposed of locally prior to export. Buyers from the United Kingdom, France, Belgium, Germany, and other European countries, also from America, Japan, China, and India, attend the sales conducted in Sydney, Albury, Melbourne, Geelong, Ballarat, Brisbane, Adelaide, Perth, Hobart, and Launceston.

The following table shows the number of bales of wool exported oversea from each State during the season ended 30th June, 1927, and the number sold in each State prior to shipment. As considerable quantities of wool grown in some States are sold in or shipped from others, the figures consequently do not show actual local production, but total oversea shipments and sales.

WOOL.—EXPORTS AND LOCAL SALES, SEASON 1926–27.

State.	Oversea Exports.		Local Sales.(*a*)	
	Bales.	%	Bales.	%
New South Wales	1,177,549	47.23	1,138,804	45.91
Victoria	594,079	23.83	(*b*)619,087	24.96
Queensland..	321,568	12.89	316,182	12.75
South Australia	209,703	8.41	235,555	9.50
Western Australia	158,398	6.35	135,332	5.45
Tasmania	32,100	1.29	35,512	1.43
Total	2,493,397	100.00	2,480,472	100.00

(*a*) Including wool sold to local woollen mills, scourers, etc. (*b*) Including wool sold at Albury (N.S.W.).

11. Exports and Local Sales of Wool, Australia, 1895 to 1927.—The number of bales of wool exported from Australia, and the number sold at local sales prior to shipment, or taken for local use from 1895 onwards are shown in the following table :—

WOOL.—EXPORTS AND LOCAL SALES, AUSTRALIA, 1895 TO 1927.

Year ended 30th June.	Oversea Exports.	Local Sales.(*a*)	Ratio of Wool sold locally to Exports.
	Bales.	Bales.	%
1895	1,595,652	817,333	51.22
1900	1,221,163	807,031	66.09
1905	1,218,969	926,940	76.04
1910	1,921,705	1,624,561	84.54
1911	1,975,378	1,642,555	83.15
1912	2,020,547	1,700,494	84.16
1913	1,718,486	1,518,650	88.37
1914	1,966,576	1,703,744	86.64
1922	2,579,484	2,226,758	86.33
1923	2,315,255	1,932,315	83.46
1924	1,708,938	1,698,141	99.37
1925	1,695,361	1,587,750	93.65
1926	2,666,473	2,655,334	99.58
1927	2,493,397	2,480,472	99.48

(*a*) Including wool absorbed by local woollen mills and wool-scouring establishments.

The steady development of the Australian wool market is clearly shown in this table. In the nineteen years ended 1914, the quantity sold locally more than doubled, and the ratio of wool sold locally to that exported increased from 51 per cent. in 1895 to over 86½ per cent. in the season ended 30th June, 1914. Particulars for the years 1915 to 1921 are not comparable owing to the abnormal conditions arising from the war, and have consequently been omitted. Excellent selling conditions have existed in Australia since 1922–23, and unusually high percentages of wool have been sold before shipment during each of the past four years. It should be remembered however that the ratio of sales to shipments is somewhat vitiated by the overlapping of the respective seasons, and the inclusion in the sales of wool for local consumption. As the purchases by Australian manufacturers are increasing in volume, an effort has been made to ascertain the actual percentage of wool sold prior to shipment. After eliminating the disturbing factors mentioned above the ratio of sales to shipments during the past four years averaged approximately 90 per cent.

12. Quantities of Various Descriptions of Wool Sold in Each State.—The quantities and ratios of the various descriptions of wool marketed in each State are given in the following table :—

WOOL.—LOCAL SALES, DESCRIPTIONS, 1926–27.

Description of Wool.	N.S.W.	Victoria. (*a*)	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	Bales.	Bales.	Bales.	Bales.	Bales.	Bales.	Bales.
Greasy ..	1,071,495	613,320	288,003	233,244	133,846	35,512	2,375,420
Scoured ..	67,309	5,767	28,179	2,311	1,486	..	105,052
Total ..	1,138,804	619,087	316,182	235,555	135,332	35,512	2,480,472
Fleece, etc. ..	1,080,953	578,517	305,238	218,510	124,131	34,471	2,341,820
Lambs' ..	57,851	40,570	10,944	17,045	11,201	1,041	138,652
Total ..	1,138,804	619,087	316,182	235,555	135,332	35,512	2,480,472
Merino ..	1,001,350	382,088	314,552	228,685	131,149	6,521	2,064,345
Crossbred and all strong breeds..	137,454	236,999	1,630	6,870	4,183	28,991	416,127
Total ..	1,138,804	619,087	316,182	235,555	135,332	35,512	2,480,472

(*a*) Including wool sold at Albury (N.S.W.).

WOOL.—LOCAL SALES, DESCRIPTIONS, 1926–27—*continued.*

Description of Wool.	N.S.W.	Victoria. (a)	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	%	%	%	%	%	%	%
Greasy ..	94.09	99.07	91.09	99.02	98.90	100.00	95.76
Scoured ..	5.91	0.93	8.91	0.98	1.10	..	4.24
Total ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Fleece, etc. ..	94.92	93.45	96.54	92.76	91.72	97.07	94.41
Lambs' ..	5.08	6.55	3.46	7.24	8.28	2.93	5.59
Total ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Merino ..	87.93	61.72	99.48	97.08	96.91	18.36	83.22
Crossbred and all strong breeds..	12.07	38.28	0.52	2.92	3.09	81.64	16.78
Total ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00

(a) Including wool sold at Albury (N.S.W.).

In the following table comparisons are made between the various descriptions of wool marketed during the years 1911–12 to 1926–27 :—

WOOL.—LOCAL SALES, DESCRIPTIONS, 1911-12 to 1926-27.

Year.	Greasy.	Scoured.	Fleece, Etc.	Lambs'.	Merino.	Cross-bred.	Total Sales.
	%	%	%	%	%	%	%
1911–12 ..	91.58	8.42	94.95	5.05	81.35	18.65	100.00
1915–16	88.43	11.57	95.79	4.21	78.42	21.58	100.00
1919–20	85.94	14.06	94.86	5.14	66.11	33.89	100.00
1923–24	94.46	5.54	95.58	4.42	80.29	19.71	100.00
1924–25	96.07	3.93	94.26	5.74	81.51	18.49	100.00
1925–26	96.67	3.33	93.46	6.54	82.05	17.95	100.00
1926–27	95.76	4.24	94.41	5.59	83 22	16.78	100.00

A very large proportion of the wool clip is marketed in the greasy state. Buyers still show a decided preference for wool in the grease, and the proportion of such wool sold during the 1926–27 season amounted to nearly 96 per cent. Of fleece and lambs' wool, the former represented 94.41, and the latter 5.59 per cent. The class of wool produced is largely merino, which is almost exclusively grown in the northern, western, and central parts of the continent, a considerable portion of the merino wool dealt with in Victoria coming from Riverina and other parts of New South Wales. The development of the frozen mutton and lamb export trade and the resultant raising of a type of sheep suitable for both mutton and wool led to a considerable increase in the production of crossbred wool throughout Australia. The percentage of such wool sold on the total sales amounted to 18.6 per cent. in 1912, whereas, eight years later, in 1919–20, it had increased to 33.9 per cent. The accumulation of large stocks of coarse wools after the war and the consequent slump in prices induced many flock-masters to return to merino, and the percentage thereof sold in the local market increased from 66.11 in 1919–20 to 83.22 in 1926–27, while crossbred declined from 33.89 to 16.78 per cent. during the same period. The requirements of the mutton and lamb trade, and the advance of closer settlement with its preference for crossbred sheep-raising in conjunction with wheat-growing or mixed farming, will compel the maintenance of the crossbred flocks ; still, the prevailing demand for fine wool at remunerative rates must influence the Australian flockmasters to concentrate in the future on the production of merino wool and its close counterparts comeback and fine crossbred.

13. Percentages of Various Descriptions of Wool Sold in each State.—The following table gives the percentage of each description of wool sold in the several States on the total sold in Australia during the season 1926–27 :—

WOOL.—LOCAL SALES, PERCENTAGES OF DESCRIPTIONS, 1926–27.

Description of Wool.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	%	%	%	%	%	%	%
Greasy ..	45.11	25.82	12.13	9.82	5.63	1.49	100.00
Scoured ..	64.07	5.49	26.82	2.20	1.42	..	100.00
Fleece, etc. ..	46.16	24.70	13.04	9.33	5.30	1.47	100.00
Lambs' ..	41.72	29.26	7.89	12.30	8.08	0.75	100.00
Merino ..	48.51	18.50	15.24	11.08	6.35	0.32	100.00
Crossbred and all strong breeds..	33.03	56.95	0.39	1.65	1.01	6.97	100.00

The bulk of the crossbred wool in Australia is grown in Victoria and the southern parts of New South Wales. Tasmania, where crossbred sheep largely predominate, comes next in order, followed by small consignments from South Australia and Western Australia. In Victoria and New South Wales a noticeable feature of the past few seasons has been a general fining-up of the medium and coarse crossbreds by the use of merino and Corriedale rams. Australian pastures and climate are naturally adapted for the growth of fine wool, and it is probable that this process of refinement will tend towards the ultimate abandonment of coarse wool-growing in Australia.

14. The Wool Market.—(i) *The* 1926–27 *Season.* The 1926–27 wool-selling season was marked by a sustained world-wide demand, and the results achieved challenge comparison with any previous wool year. The stabilization of values which was in evidence during the previous season continued, and prices were raised to a point more in keeping with production costs in Australia. A record clip was produced during the season, and this huge volume of wool was practically cleared under stable market conditions in a period of approximately eight months. These results were all the more remarkable when it is remembered that they were obtained in the face of very pronounced difficulties in several of the leading wool-consuming countries. It was thought that the financial crisis in France and industrial trouble in England would seriously interfere with the operations of buyers from these countries, but these obstacles to trade were eventually overcome and large parcels of wool were taken by both countries.

The 1926–27 clip, with the exception of the important production from Queensland, which State was enveloped in drought over a very wide area, was well grown, sound, of good body, style and handle. It was stronger in fibre than the previous clip, carried more condition, and generally reflected the bountiful conditions under which it was grown.

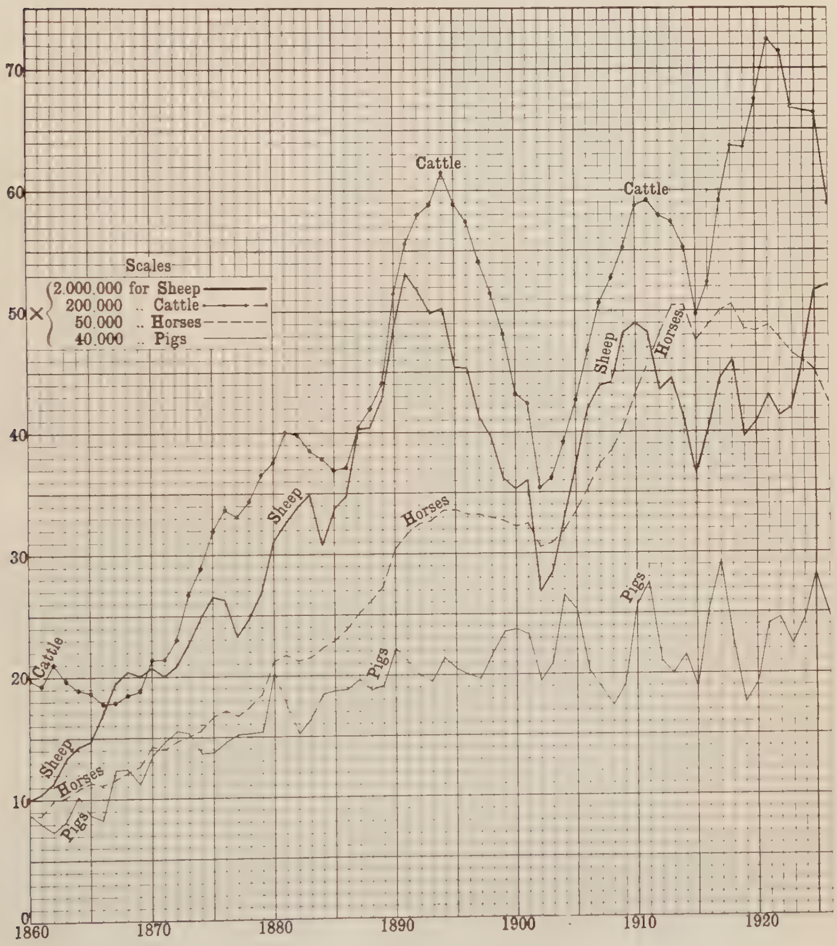
During the year the sales figures amounted to 2,480,472 bales, compared with 2,655,334 bales the previous year. In 1925–26, however, the sales were augmented by 500,000 bales of carry-over wool, whereas the sales during 1926–27 represent current production only. Values appreciated slightly during the season, the average bale realizing 13s. 8d. more than the previous year, while the aggregate sales amounted to £55,610,468, as against £57,718,015 in 1925–26.

The generous conditions under which the clip was grown were not favourable to exceptional prices, and the season's results were more satisfactory from the point of average values rather than record prices. Except in the lamb sections and scoured crossbred fleece, top prices were less than the previous year, and of course all lines were far below the outstanding figures obtained in 1924-25.

The season's record for greasy merino fleece was secured for a line of CA Wood wool sold in Tasmania, the first time in recent years that this centre has occupied so prominent a position. The Geelong market secured no less than six records, while Brisbane and Melbourne obtained three each, Sydney two, and Tasmania one.

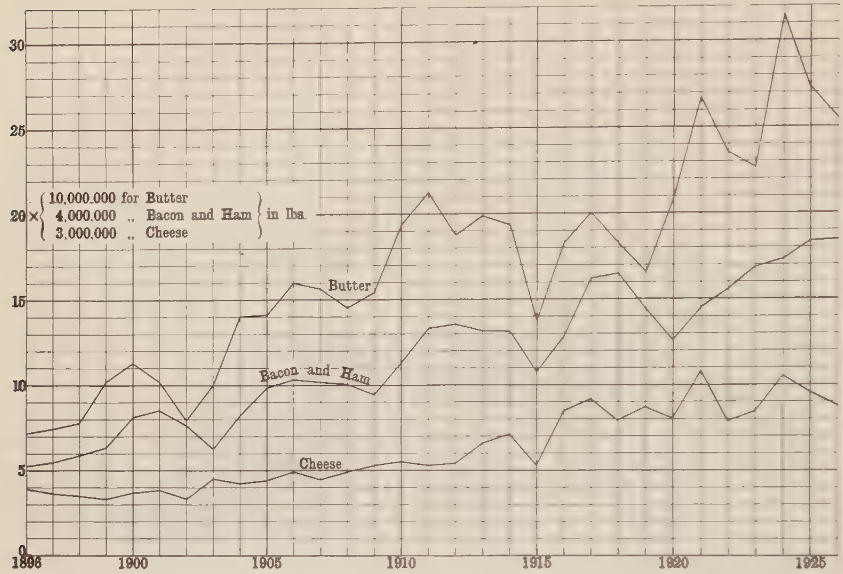
(ii) *Comparison with Pre-war Prices.* In the following table a comparison of the season's record prices is made with the previous year and with pre-war, appraisement and the highest post-war points :—

NUMBER OF HORSES, CATTLE, SHEEP, AND PIGS—AUSTRALIA, 1860 TO 1926.



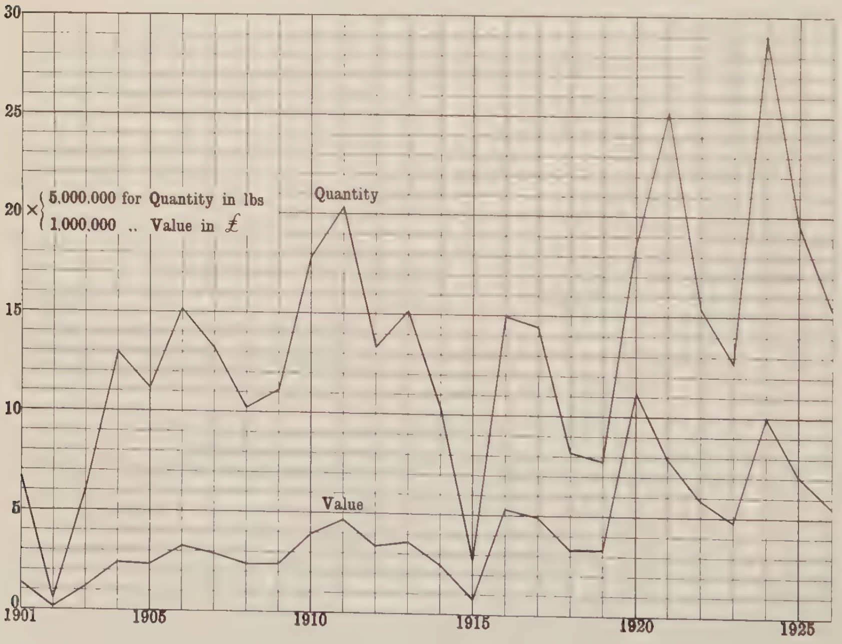
EXPLANATION.—The base of each small square represents an interval of one year, and the vertical side 2,000,000 in the case of sheep, 200,000 for cattle, 50,000 for horses, and 40,000 for pigs.

PRODUCTION OF BUTTER, CHEESE, AND BACON AND HAM—AUSTRALIA
1896 TO 1926.

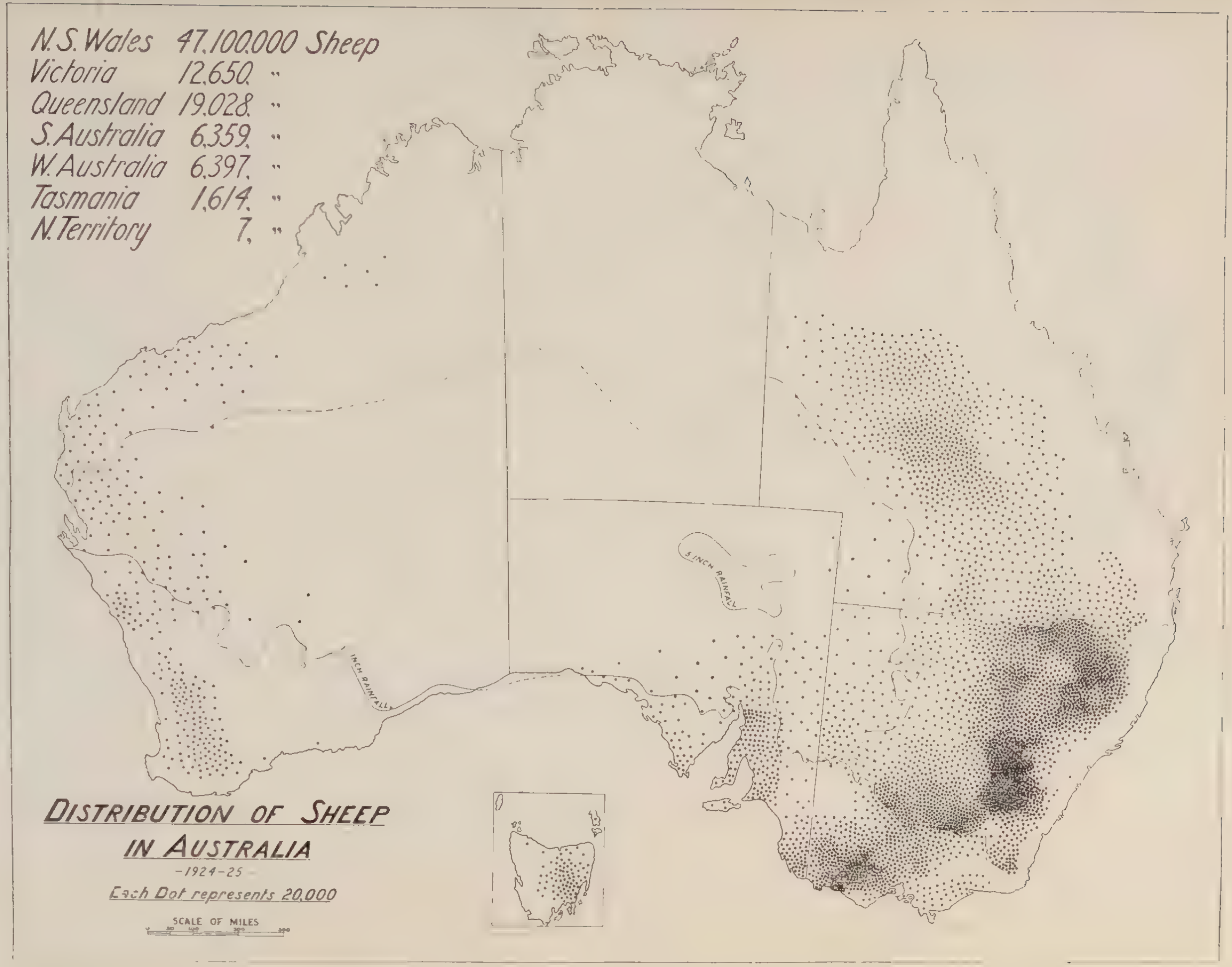


EXPLANATION.—The base of each small rectangle represents an interval of one year, and the vertical height of each denotes in the case of butter 10,000,000 lbs.; in the case of bacon and ham 4,000,000 lbs.; and in the case of cheese 3,000,000 lbs.

QUANTITY AND VALUE OF NET EXPORTS OF BUTTER FROM AUSTRALIA, 1901 TO 1926.



EXPLANATION.—The base of each small rectangle represents an interval of one year, and the vertical height of each 5,000,000 lbs. in weight, or £1,000,000 in value.

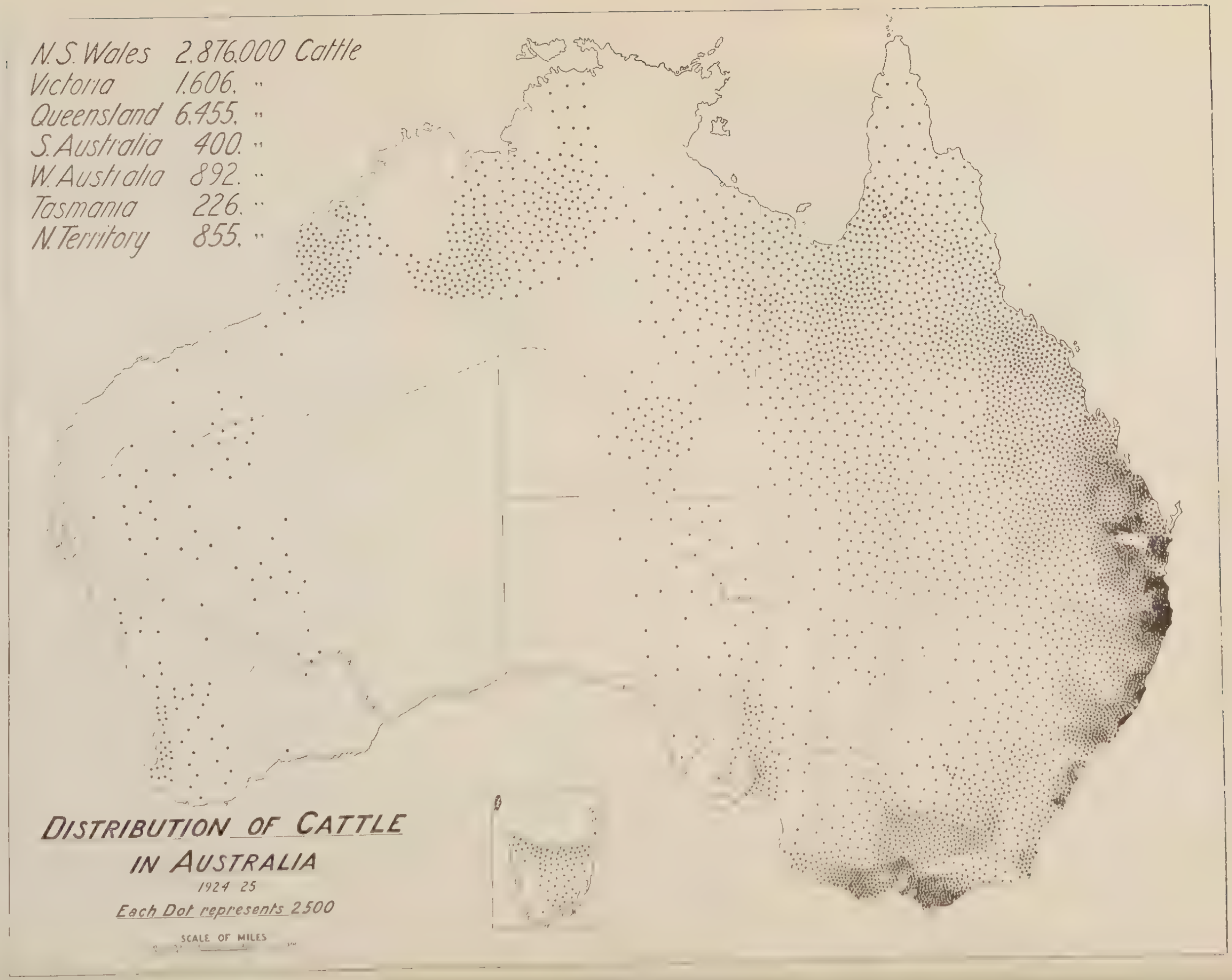


DISTRIBUTION OF SHEEP IN AUSTRALIA

-1924-25-

Each Dot represents 20,000

N.S. Wales	47,100,000 Sheep
Victoria	12,650 "
Queensland	19,028 "
S. Australia	6,359 "
W. Australia	6,397 "
Tasmania	1,614 "
N. Territory	7 "


N.S.Wales 2,876,000 Cattle
Victoria 1,606, "
Queensland 6,455, "
S.Australia 400. "
W.Australia 892. "
Tasmania 226. "
N.Territory 855. "
DISTRIBUTION OF CATTLE
IN AUSTRALIA
1924 25
Each Dot represents 2500
SCALE OF MILES

COMPARISON OF RECORD WOOL PRICES IN AUSTRALIA, 1913-14 TO 1926-27.

Description.	1913-14.	Appraisement.	1924-25.	1925-26.	1926-27.
	d.	d.	d.	d.	d.
Greasy Merino—					
Fleece	20¼	31¾	53¼	42½	41¾
Broken	16¼	27¼	45¾	32¼	27¾
Pieces	14¾	26	43½	29½	26¾
Bellies	13	21¾	40¼	26½	24¾
Locks	8¼	13	20¾	16¼	15¾
Lambs	29½	27½	48½	33¼	46¾
Greasy Comeback—					
Fleece	16¼	31	50½	34½	32¼
Lambs	16½	24½	41½	26½	30
Greasy Crossbred—					
Fleece	15	29½	43½	28	27½
Lambs	16½	23½	37	23¾	24½
Scoured Merino—					
Fleece	28	49	70½	48¼	47
Pieces	24½	40½	63	42¾	42
Lambs	23¾	44	59½	39¾	41
Scoured Crossbred—					
Fleece	20¾	40¾	45	31	32

(iii) *Record Prices.* The records secured for the principal descriptions of wool by the leading brands since 1916-17 are shown below, together with the selling centre and season of sale :—

RECORD PRICES OBTAINED FOR WOOL IN AUSTRALIAN MARKETS, 1916-17 TO 1926-27.

Description.	Price.	Brand.	Bales.	Selling Centre.	Season.
Greasy Merino :	d.				
Fleece ..	53¼	Plains	4	Geelong ..	1924-25
Broken	45¾	R/Carngham	34	Geelong ..	1924-25
Pieces ..	43½	Ware (conj.)	11	Geelong ..	1924-25
Bellies ..	40¼	Langi/Kal Kal ..	12	Geelong ..	1924-25
Locks ..	22½	T/Binda	1	Sydney ..	1923-24
		Wattle Grove/M ..	6	Geelong ..	1923-24
		V (reversed) over W/Penlan Downs (in ½ circle)	5	Brisbane ..	1923-24
Lambs ..	48½	Ware (conj.)	1	Geelong ..	1924-25
Greasy comeback :					
Fleece ..	50½	WTA/Boorook ..	8	Geelong ..	1924-25
Lambs ..	41½	North Station ..	8	Geelong ..	1924-25
Greasy crossbred :					
Fleece ..	43½	Mondilibi	4	Geelong ..	1924-25
		GR	25	Geelong ..	1924-25
		Barton	6	Tasmania ..	1924-25
Lambs ..	37	JM/Tabletop ..	3	Melbourne ..	1924-25
Scoured merino :					
Fleece ..	70½	AS in centre of double triangle, B/Tarbrax	63	Brisbane ..	1924-25
Pieces ..	63	Inisfail Downs/BB ...	18	Brisbane ..	1924-25
Lambs ..	59½	Garomna	4	Brisbane ..	1924-25
Scoured crossbred :					
Fleece ..	52	Tomslake	9	Sydney ..	1923-24

Although 53¼d. represents the highest price received for Australian greasy wool at recent Australian sales, the record price, according to "Dalgety's Annual Wool Review," for such wool in modern times was 109d. secured in London for the Geelong wool "NC" in February, 1920, while a line of scoured wool sold at London in March, 1920, realized 136d. per lb. In the early days John Macarthur sold wool at 126d. per lb., and in 1827 the "Sydney Gazette" contained an authentic record of Macarthur having secured 196d. per lb. for a single bale of the historic "J M'A" brand, sold at Garraway's Coffee House, Cornhill, London. Macarthur therefore not only played an important part in the founding of Australia's staple industry, but established a record that is still unbeaten.

(iv) *Wool Realization Scheme.* The British Australian Wool Realization Association Ltd. ("B.A.W.R.A.") was formed on the 27th January, 1921, for the purpose of realizing the large stock of wool remaining at the close of the Imperial Wool Purchase Scheme, which covered part of the 1916–17 clip and the complete clips of the three following seasons. Under the Imperial Purchase Scheme the British Government bought the whole of the Australian wool at a flat rate of 15½d. per pound, and at its termination the Australian grower had received full payment through the Central Wool Committee. The conditions of sale to the British Government contained the provision that, when wool was sold for civilian purposes, the profits therefrom should be divided equally between the British Government and the Commonwealth Government, the latter representing the growers. As all the wool had been paid for and there was a credit in cash from sales of wool and economies effected by the Central Wool Committee and some 1,836,005 bales remained unsold, there were substantial realizable profits to be divided between the two parties to the Imperial Wool Contracts. On its formation "B.A.W.R.A." automatically became the owner of half the Australian carry-over wool, and was appointed agent for the sale of the British Government's half of such Australian wools, the New Zealand and Falkland Island carry-over wools owned by the British Government, also a large quantity of Australian and New Zealand sheepskins. Towards the end of the year 1921, 80,550 bales of South African wool owned by the British Government were handed over to the Association for disposal under the Agency Agreement. "B.A.W.R.A." interests, which were transferred by the Central Wool Committee to the Association consisted of cash, wool and other assets. They were assessed and capitalized at £22,000,000; and subject to certain reservations, each supplier of Australian wool during the Imperial Purchase Scheme was allotted negotiable documents in proportion to the appraised value of the wool which he had contributed. The marketing of "B.A.W.R.A." wools was successfully carried out at various centres in England and on the Continent, and the concluding auction sale took place at Liverpool on 2nd May, 1924, when the last bale of wool carried over from the Imperial Wool Purchase Scheme was disposed of. The whole of the wool controlled by "B.A.W.R.A." was sold in three and a half years, and passed into consumption together with the current clips of the wool-growing countries.

The following statement provides a summary of the payments made to wool-growers under the Imperial Wool Purchase Scheme and of the distribution of profits accruing to growers therefrom to 31st December, 1927:—

STATEMENT OF AMOUNTS DISTRIBUTED BY CENTRAL WOOL COMMITTEE AND "B.A.W.R.A." TO 31st DECEMBER, 1927.

1916—November ..	Initiation of Imperial Wool Purchase Scheme.		
1917—January 3rd ..	First appraisement of wool.		
1920—June 30th ..	Last appraisement of wool.		
	Total f.o.b. value of wool and sheepskins ..		£172,925,922
1920—October 27th ..	Payment by Central Wool Committee of 5 per cent. profits dividend		£7,653,000
1921—January ..	Formation of "B.A.W.R.A." Limited— Issue of Priority Wool Certificates and Share Certificates.		
1921—July 30th ..	Payment—47½ per cent — Priority Wool Certificates ..	£4,703,581	
	Cash retirement of small interests and fractional payments ..	£249,697	
1922—May 18th ..	Payment—52½ per cent — Final payment of Priority Wool Certificates	£5,198,686	
1923—April 14th ..	First capital reduction— Payment 10s. per share ..	£5,924,018	
1923—May 1st ..	Last bale of wool shipped from Australia		
1924—February 12th ..	Second capital reduction— Payment 9s. per share ..	£5,331,616	
1924—May 2nd ..	Last bale of wool sold in England.		
1927—November 15th ..	Final capital payment— 1s. per share	£592,402	
			£22,000,000
			£202,578,922
1927—November 15th ..	First liquidation payment— 12s. 6d. per share		£7,405,026
			£209,983,948

15. United Kingdom Importation of Wool.—The appended statement of the quantity and value of wool imported into the United Kingdom during the year 1926 from the principal wool-producing countries shows the important position which Australia occupies in the supply of wool to the mother country :—

WOOL(*a*).—IMPORTS, UNITED KINGDOM, 1926.

Country from which imported.	Quantity.	Value.
	lbs.	£
Australia ..	304,437,500	25,646,232
New Zealand ..	183,117,700	14,844,520
Union of South Africa ..	147,741,200	10,818,911
Argentine Republic ..	52,887,700	3,015,680
India ..	41,393,700	2,274,731
Chile ..	25,568,300	1,763,971
France ..	14,823,400	1,675,346
Uruguay ..	8,896,800	580,167
Irish Free State	9,423,800	499,705
Belgium ..	2,911,000	349,444
United States of America ..	3,376,000	282,757
Peru ..	4,224,100	265,323
Falkland Islands	2,722,300	174,130
Other British Possessions ..	2,781,200	165,349
Germany ..	1,339,500	140,877
Other Countries	4,703,900	284,943
Total ..	810,348,100	62,782,086

(*a*) Greasy, Scoured, and Tops.

Of the importations of wool into the United Kingdom, Australian wool represented 38 per cent. of quantity and 41 per cent. of value, and New Zealand 23 per cent. of quantity and 24 per cent. of value. It is interesting to note that 691,617,400 lbs., valued at £54,423,578, were received from British Possessions, being 85 per cent. of the total weight and 87 per cent. of the total value imported.

§ 6. Trade in Hides and Skins.

1. Extent of Trade.—In addition to the hides and skins treated in the tanneries of the several States, a very considerable export trade is carried on, the value of Australian cattle and horse hides and sheep and other skins exported during the five years 1922–23 to 1926–27 amounting to £37,893,142, or an average of £7,578,628 per annum.

2. Sheepskins with Wool.—By far the largest item included in the amount mentioned in the preceding sub-section arises from the value of sheepskins with wool—the exports of which during the five years aggregated £16,800,615. France was the largest purchaser taking 47 per cent. of the total consignments, while United Kingdom ranked next with 38 per cent., and the remaining 15 per cent. was shipped principally to the United States of America and Belgium. The exports of sheepskins with wool during each of the years from 1922–23 to 1926–27 were as follows :—

SHEEPSKINS WITH WOOL.—EXPORTS, AUSTRALIA, 1922–23 TO 1926–27.

Particulars.		1922–23.	1923–24.	1924–25.	1925–26.	1926–27.	Total for 5 years.
Sheepskins (with wool) ..	No.	9,610,335	7,063,988	6,245,268	8,585,054	9,152,287	40,656,932
Value	£	2,948,489	3,111,128	3,821,837	3,509,328	3,409,833	16,800,615

3. Sheepskins without Wool.—In the case of sheepskins without wool the principal countries of consignment are the United States of America and the United Kingdom. These two countries were responsible for 88 per cent. of the exports during the past five years, the purchases of the United States of America alone amounting to 66 per cent. of the total shipments. Particulars concerning exports are as follows :—

SHEEPSKINS WITHOUT WOOL.—EXPORTS, AUSTRALIA, 1922–23 TO 1926–27.

Particulars.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.	Total for 5 years.
Sheepskins (without wool) .. No.	1,150,739	599,866	64,425	89,860	217,102	2,121,992
Value .. .. £	78,630	50,655	7,139	13,858	30,228	180,510

4. Hides.—(i) *Exports.* The export trade in Australian cattle hides, which fell away during the war years, has again become important. Considerable quantities were shipped oversea during each of the last five years mainly to the United Kingdom, Italy, and Germany, which countries took respectively 30, 21, and 17 per cent. of the total exports during the period. United States of America and Belgium with shipments amounting to 469,954 and 207,886 respectively were the next largest purchasers.

Particulars concerning the export of cattle hides during the past five years are as follows :—

CATTLE HIDES.—EXPORTS, AUSTRALIA, 1922–23 TO 1926–27.

Particulars.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.	Total for 5 years.
Cattle Hides .. No.	651,888	924,092	1,167,938	916,956	889,746	4,550,620
Value .. .. £	773,691	817,719	1,322,088	1,105,540	998,981	5,018,019

Calfskins exported during the years 1922–23 to 1926–27 numbered 940,137, valued at £253,820, and were shipped mainly to the United States of America, the value of the skins taken by that country averaging 60 per cent. of the total exports during the past five years. The annual export of horse hides is very small, and averaged only 3,010 hides, valued at £2,047.

(ii) *Imports.* The import trade in cattle hides and calfskins is fairly considerable, the number annually imported on the average during the past five years amounting to 491,707. New Zealand supplies the great bulk of these importations, and shipments of limited quantities are also obtained from the Pacific Islands, France, and Italy. The number and value of cattle hides, including calfskins, imported into Australia during the five years 1922–23 to 1926–27 are as follows :—

CATTLE HIDES.—IMPORTS, AUSTRALIA, 1922–23 TO 1926–27.

Particulars.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.	Total for 5 years.
Cattle Hides .. No.	675,471	480,265	456,589	474,342	371,868	2,458,535
Value .. .. £	541,079	533,539	494,501	462,066	437,932	2,469,117

The number of horse hides imported into Australia is unimportant. Imports during the last five years numbered 14,489, valued at £15,657.

5. Other Skins.—The oversea exports of skins other than those mentioned in the preceding sub-sections are of considerable importance. During the past five years the value of these shipments amounted to £15,708,334, or an annual average of £3,141,667. Rabbit and hare skins contributed most largely to this total, followed by opossum and kangaroo skins. The individual exports from 1922–23 to 1926–27 were as follows :—

OTHER SKINS.—EXPORTS, AUSTRALIA, 1922–23 TO 1926–27.

Particulars.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.	Total for 5 years.
	£	£	£	£	£	£
Rabbit and Hare	1,962,664	1,349,978	2,492,438	2,880,360	2,837,663	11,523,103
Opossum ..	498,184	410,660	127,774	362,406	921,833	2,320,857
Kangaroo ..	273,977	290,809	182,009	154,476	137,994	1,039,265
Fox	77,300	137,733	62,988	112,986	103,683	494,690
Wallaby ..	37,790	57,306	55,653	74,464	46,655	271,868
Other ..	3,833	4,086	10,912	13,320	26,400	58,551
Total ..	2,853,748	2,250,572	2,931,774	3,598,012	4,074,228	15,708,334

The destination of these skins was practically confined to the United States of America and the United Kingdom, the former country taking the bulk of the rabbit, hare, and kangaroo skins, while the fox, opossum, and wallaby skins were mainly despatched to the United Kingdom. The shipments of the various skins to these two countries during the past five years were as follows :—

OTHER SKINS.—EXPORTS TO UNITED STATES AND UNITED KINGDOM, 1922–23 TO 1926–27.

Particulars.	United Kingdom.	United States of America.
	£	£
Rabbit and Hare	2,981,861	8,033,754
Opossum	1,196,083	944,673
Kangaroo	153,196	880,619
Fox	376,099	100,311
Wallaby	242,092	25,931
Other	37,442	11,923
Total	4,986,773	9,997,211

CHAPTER XVII.

AGRICULTURAL PRODUCTION.

NOTE.—Except where otherwise stated, the "agricultural" years hereafter mentioned are taken as ending on 30th June.

§ 1. Introductory.

1. Early Attempts at Agriculture.—The instructions issued to Captain Phillip on the 25th April, 1787, directed him, amongst other things, to proceed as soon as possible to the cultivation of the soil "under such regulations as may appear to be necessary and best calculated for securing supplies of grain and provisions." When the settlers landed at Botany Bay, however, it was found that the glowing accounts published in England by members of Captain Cook's expedition of the fertility of the soil in that locality were considerably overdrawn. Even when Phillip and his company moved round to Port Jackson on the 26th January, 1788, matters were for a time in no better case. The ground in the immediate neighbourhood of the settlement was not suitable for the cultivation of cereal crops, and when the time came to cultivate the soil it was found that there were very few who possessed the slightest acquaintance with the art of husbandry.

2. The First Sowing.—In his dispatch of the 15th May, 1788, Captain Phillip states that it was proposed to sow 8 acres with wheat and barley, although, owing to the depredations of field mice and ants, he was doubtful of the success of the crops.

3. Discovery of Suitable Agricultural Land.—A branch settlement was formed at Rosehill, on the Parramatta River, towards the close of 1788, and here grain crops were successfully raised. In his despatch of 12th February, 1790, Phillip refers to the harvest at Rosehill, at the end of December 1789, as consisting of 200 bushels of wheat and 60 of barley, in addition to small quantities of oats, Indian corn, and flax. By the year 1791 there were 213 acres under crop in this locality. In 1792 a new settlement was formed at Toongabbie, about 3 miles westward of Parramatta, where Phillip states "there are several thousand acres of exceeding good ground." The Hawkesbury Valley, which probably contains some of the richest land in the world, was first settled in 1794. For a long time agricultural operations in Australia were restricted to the narrow belt of country between the tableland and the east coast of New South Wales, as it was not until the year 1813 that a passage was discovered across the Blue Mountains to the fertile plains of the west

§ 2. Progress of Agriculture.

1. Early Records.—In an "Account of Live Stock and Ground under Crop in New South Wales, 19th August, 1797," Governor Hunter gives the acreage under crop as follows:—Wheat, 3,361 acres; maize, 1,527 acres; barley, 26 acres; potatoes, 11 acres; and vines, 8 acres.

At a muster taken in 1808 the following was the return of crops:—Wheat, 6,874 acres; maize, 3,389 acres; barley, 544 acres; oats, 92 acres; peas and beans, 100 acres; potatoes, 301 acres; turnips, 13 acres; orchards, 546 acres; and flax and hemp, 37 acres.

By the year 1850 the area under crop had increased to 491,000 acres, of which 198,000 acres were cultivated in what is now the State of New South Wales, and 169,000 acres in Tasmania. At the end of 1850 the area under cultivation in Victoria, which was then the Port Phillip District of New South Wales, was 52,190 acres.

The gold discoveries of 1851 and subsequent years had at first a very disturbing effect on agricultural progress, the area under crop declining from 491,000 acres in 1850 to 458,000 acres in 1854; the area under cultivation in New South Wales decreased by nearly 66,000 acres, while in Tasmania a falling off of over 41,000 acres was experienced. The demand for agricultural products occasioned by the large influx of population was, however, soon reflected in the increased area cultivated, for at the end of 1858 the land under crop in Australia totalled over a million acres. The largest increase took place in Victoria, which returned an area of 299,000 acres. For the same year South Australia had 264,000 acres in cultivation, Tasmania 229,000 acres, and New South Wales 223,000 acres.

2. Progress of Cultivation.—(i) *General.* The following table shows the area under crop in each of the States and Territories of Australia at decennial intervals since 1860 and during each of the last five seasons:—

AREA UNDER CROP, 1860 TO 1926–27.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Ter.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1860–1	246,143	387,283	3,353	359,284	24,705	152,860	..	..	1,173,628
1870–1	385,151	692,840	52,210	801,571	54,527	157,410	..	..	2,143,709
1880–1	606.277	1,548,809	113,978	2,087,237	63,902	140,788	..	..	4,560,991
1890–1	852.704	2,031,955	224,993	2,093,515	69,678	157,376	..	..	5.430,221
1900–1	2,446.767	3,114,132	457,397	2,369,680	201,338	224,352	..	..	8,813,666
1910–11	3,386,017	3,952,070	667,113	2,746,334	855,024	286,920	360	..	11,893,838
1920–21	4,465,143	4,489,503	779,497	3,231,083	1,804,987	297,383	296	1,966	15,069,858
1922–23	4,694,287	4,862,548	863,755	3,575.452	2,274,998	298,611	427	2,172	16,572,250
1923–24	4,809,591	4,682,144	871,968	3,562,551	2,323,070	279,122	440	2,300	16,531,186
1924–25	4,912,124	4,761,394	1,069,837	3,557,405	2,710,856	263,872	342	2,361	17,278,191
1925–26	4,541,360	4,433,492	1,033,765	3,583,867	2,932,110	266.412	391	2,181	16,793,578
1926–27	4,593,847	4,735,173	941,783	3,883,920	3,324,523	289,364	440	3,449	17,772,499

The progress of agriculture was uninterrupted from 1860 onwards, reaching its maximum in 1915–16, when 18,528,234 acres were cultivated. Following that year, the decline in wheat-growing and the effects of the drought of 1918–19 reduced the acreage to 13,296,407 acres in 1919–20, a decrease of 5,231,827 acres in the space of four years. With the removal of the obstacles to the disposal of the wheat crop, the area began to expand in 1920–21, and despite occasional adverse seasons, the area planted in 1926–27 amounted to more than 17¾ million acres. Wheat continues to be the most extensively-grown crop in Australia, the area thereunder for both grain and hay during 1926–27 amounting to nearly 71 per cent. of the total acreage under cultivation. The extension of the wheat area since 1919–20, despite intermittent adverse climatic and market conditions, is a happy augury for the continuance of agricultural development in Australia. The maximum area cultivated in 1915–16, viz., 18,528,234 acres, was the outcome of a special war effort, and the results obtained far exceeded those for any previous year.

(ii) *Relation to Population.* The total area under cultivation per head of population reached its lowest point in recent years during 1919–20, but since that year the position has considerably improved. The rate of progress during the past decennium, however, has not kept pace with the gain in population. Details for the past five seasons are as follows :—

AREA UNDER CROP PER 1,000 OF POPULATION, 1922-23 TO 1926-27.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1922–23 ..	2,160	3,058	1,096	6,968	6,621	1,364	120	849	2,942
1923–24 ..	2,177	2,881	1,075	6,789	6,566	1,274	124	877	2,875
1924–25 ..	2,179	2,873	1,281	6,606	7,444	1,211	95	788	2.942
1925–26 ..	1,976	2,633	1,200	6,497	7,878	1,228	107	553	2,803
1926–27 ..	1,957	2,766	1,068	6,857	8,777	1,347	113	701	2,908

(iii) *Relation to Total Area.* The next table furnishes a comparison of the area under crop in the several States and Territories and Australia with the respective total areas. For Australia as a whole, the area under crop in 1926–27 represented only about 1 acre in every 107. In Victoria the proportion was about 1 acre in every 12, in New South Wales 1 in 43, in Tasmania 1 in 58, in South Australia 1 in 63, in Western Australia 1 in 188, in Queensland 1 in 456, and in the Federal Territory 1 in 174.

PERCENTAGE OF AREA UNDER CROP ON TOTAL AREA, 1922-23 TO 1926-27.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
	%	%	%	%	%	%	%	%	%
1922–23 ..	2.370	8.645	0.201	1.470	0.364	1.780	..	0.361	0.871
1923–24 ..	2.429	8.324	0.203	1.465	0.372	1.664	..	0.382	0.868
1924–25 ..	2.480	8.465	0.249	1.462	0.434	1.573	..	0.392	0.908
1925–26 ..	2.293	7.882	0.241	1.473	0.469	1.587	..	0 362	0.882
1926–27 ..	2.319	8.419	0.219	1.597	0.533	1.725	..	0.573	0.934

In the Northern Territory the proportion which the area under crop bears to the total area is, at present, practically negligible.

3. **Artificially-sown Grasses.**—In all the States there are considerable areas under artificially-sown grasses mainly sown on uncultivated land after burning off the existing vegetation, and not included in "area under crops." Statistics regarding the areas under such grasses are as shown hereunder :—

AREA UNDER SOWN GRASSES, 1922-23 TO 1926-27.

Season.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Nor. Ter.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1922–23	1,925,432	957,454	475,226	22,278	25,377	857,581	510	18	4.263,876
1923–24	1,930,894	1,024,591	498.552	30,800	38,022	799,443	500	18	4,322,820
1924–25	1,993,694	944.339	538,165	64,212	60.257	866,331	500	24	4,467,522
1925–26	2,017,831	933,271	532.052	60.453	89,170	821,807	500	18	4,455,102
1926–27	2,036,873	952,239	543,528	74,484	128,751	791,210	500	18	4,527,603

The increase in the area of the grass lands of Australia during recent years is due in large measure to the development of the dairying industry referred to in the next chapter.

§ 3. Relative Importance of Crops.

1. **Distribution of Crops.**—The following table gives the areas in the several States under each of the principal crops for the season 1926–27 :—

DISTRIBUTION OF CROPS, 1926–27.

Crop.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Wheat ..	3,352,298	2,915,315	57,084	2,768,403	2,571,187	23,194	..	438	11,687,919
Oats	104,450	303,424	210	152,178	234,826	48,361	..	665	844,114
Maize ..	128,512	20,046	137,542	2	32	..	40	4	286,178
Barley—									
Malting ..	4,071	59,935	250	242,527	9,076	4,987	..	..	320,846
Other ..	1,555	28,961	149	14,001	4,750	678	..	3	50,097
Beans and Peas	213	11,476	16	15,554	2,919	18,765	..	..	48,943
Rye	862	864	3	337	345	497	..	..	2,908
Other Cereals ..	3,958	..	9	..	60	..	..	..	4,027
Hay	623,424	1,080,993	40,141	496,105	358,487	98,289	..	2,192	2,699,631
Green Forage ..	217,385	87,241	342,580	105,170	109,314	19,213	..	54	880,957
Grass and other Seeds ..	..	879	971	855	46	672	..	..	3,423
Orchards and other Fruit Gardens ..	74,682	83,215	35,145	31,570	18,512	33,322	..	5	276,451
Vines—									
Productive ..	12,461	37,340	1,268	46,531	4,613	..	..	..	102,213
Unproductive	1,820	3,272	414	3,740	661	..	..	..	9,907
Market Gardens	8,184	17,751	1,096	1,320	2,872	599	..	46	31,868
Sugar Cane—									
Productive ..	10,128	..	189,312	..	..	..	..	..	199,440
Unproductive	8,181	..	77,207	..	..	..	..	..	85,388
Potatoes ..	21,906	66,185	8,642	3,549	5,144	33,984	..	35	139,445
Onions ..	226	8,471	797	454	91	18	..	..	10,057
Other Root Crops	1,385	3,000	2,476	602	277	5,064	50	..	12,854
Tobacco ..	881	1,154	125	27	5	..	..	..	2,192
Broom Millet ..	3,046	1,493	351	..	..	..	..	..	4,890
Pumpkins and Melons ..	4,097	1,590	5,963	304	643	..	..	6	12,603
Hops ..	..	196	..	1	..	1,374	..	..	1,571
Cotton—									
Productive ..	1	..	18,743	..	31	..	30	..	18,805
Unproductive	..	..	12,717	..	..	..	..	..	12,717
All other Crops	10,121	2,372	8,572	690	632	347	320	1	23,055
Total Area ..	4,593,847	4,735,173	941,783	3,883,920	3,324,523	289,364	440	3,449	17,772,499

2. **Relative Areas of Crops in States and Territories.**—Taking the principal crops, i.e., those in the case of which the cultivation in Australia amounts to more than 100,000 acres, the proportion of each in the various States and Territories on the total area under crop for the season 1926–27 is shown in the next table. In four of the States, viz., New South Wales, Victoria, South Australia, and Western Australia, wheat-growing for grain is by far the most extensive form of cultivation, while in the same States the hay crop is second in importance. In Victoria and Western Australia, the oat crop occupies third position, while green forage ranks third in New South Wales, and barley in South Australia. In Queensland, the principal crops in the order of importance are green forage, sugar cane, maize, and wheat, while in Tasmania, hay, oats, potatoes, and orchards and fruit gardens occupy the leading positions.

As pointed out previously, wheat is the main crop in Australia, the area thereunder for grain and hay representing in 1926–27 nearly 71 per cent. of the total area under cultivation.

RELATIVE AREAS UNDER CROP, 1926–27.

Crop.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
	%	%	%	%	%	%	%	%	%
Wheat ..	72.97	61.57	6.06	71.28	77.34	8.02	..	12.70	65.76
Hay ..	13.57	22.83	4.26	12.77	10.78	33.97	..	63.55	15.19
Oats ..	2.27	6.41	0.02	3.92	7.06	16.71	..	19.28	4.75
Green Forage ..	4.73	1.84	36.38	2.71	3.29	6.64	..	1.57	4.96
Maize ..	2.80	0.42	14.61	0.00	0.00	..	9.09	0.12	1.61
Barley ..	1.63	1.76	3.73	0.81	0.56	11.51	..	0.14	2.09
Orchards and Fruit Gardens..	0.12	1.88	0.04	6.61	0.42	1.96	..	0.09	1.56
Sugar-cane	0.40	..	28.30	..	..	..	..	..	1.60
Potatoes ..	0.48	1.40	0.92	0.09	0.15	11.74	..	1.01	0.78
Vineyards	0.31	0.86	0.18	1.29	0.16	..	..	..	0.63
All other ..	0.72	1.03	5.50	0.52	0.24	9.45	90.91	1.54	1.07
Total ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

3. Area of Chief Crops, Australia, 1922–23 to 1926–27.—The acreage under each of the principal crops in Australia during the last five seasons is shown below :—

AREA OF CHIEF CROPS.—AUSTRALIA, 1922–23 TO 1926–27.

Crop.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	Acres.	Acres.	Acres.	Acres.	Acres.
Wheat	9,763,861	9,540,434	10,824,966	10,201,276	11,687,919
Hay	3,338,456	3,406,226	3,026,405	2,832,003	2,699,631
Oats	1,014,376	1,076,930	1,165,127	1,013,233	844,114
Green Forage ..	893,871	961,311	564,924	1,055,210	880,957
Maize	313,202	316,307	398,949	297,140	286,178
Barley	342,196	258,775	260,248	374,876	370,943
Orchards and Fruit Gardens	275,687	273,845	276,904	275,245	276,451
Sugar-cane ..	216,886	237,280	273,512	288,872	284,828
Potatoes	135,735	134,352	138,776	136,925	139,445
Vineyards	105,476	112,965	114,394	111,697	112,120
All other Crops ..	172,504	212,761	233,986	207,101	189,913
Total ..	16,572,250	16,531,186	17,278,191	16,793,578	17,772,499

Seasonal and economic influences are reflected in the areas of the principal crops grown in Australia during the past five years. Since 1922–23 the most notable advance has taken place in wheat, followed by sugar cane and barley, while the largest decreases have occurred in hay, oats, and maize.

§ 4. Wheat.

1. **Progress of Wheat-Growing.**—(i) *Area and Production.* Wheat is the principal crop raised in Australia, and its development during the past 30 years constitutes the most interesting feature of Australian agriculture. Since 1895, when the area under wheat amounted to 3½ million acres, an average of 260,000 acres has been added annually, until in 1926–27 more than 11½ million acres were cut for grain. The area and yield of wheat for grain are given below for each State for the five years ended 1926–27, and are shown from the year 1860 onwards in the graphs hereinafter. An estimate is also appended for the 1927–28 crop :—

WHEAT.—AREA AND PRODUCTION, 1922–23 TO 1927–28.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Fed. Cap. Ter.	Australia.
				AREA.				
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1922–23 ..	2,942,339	2,644,314	145,492	2,453,086	1,552.868	25,244	518	9,763,861
1923–24 ..	2,945,040	2,454,117	51,149	2,418,415	1,656,915	14,503	295	9,540,434
1924–25 ..	3,549,367	2,705,323	189,145	2,499,852	1,867.614	12,954	711	10,824,966
1925–26 ..	2,924,745	2,513,494	165,999	2,465,648	2,112,032	19,091	267	10,201,276
1926–27 ..	3,352,298	2,915,315	57,084	2,768,403	2,571,187	23,194	438	11,687,919
1927–28(*a*) ..	3,006,770	3,064,172	230,000	2,941,360	2,993,677	28,000	..	12,263,979
				YIELD.				
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bush.	Bushels.
1922–23 ..	28,660,824	35,697,220	1,877,836	28,784,767	13,857,432	569,587	7,176	109,454,842
1923–24 ..	33,171,300	37,795,704	243,713	34,551,955	18,920,271	305,628	4,700	124,993,271
1924–25 ..	59,752,435	47,364,495	2,779,829	30,528,625	23,887,397	231,388	14,565	164,558,734
1925–26 ..	33,800,619	29,255,534	1,973,477	28,603,101	20,471,177	395,603	4 881	114,504.392
1926–27 ..	47,373,713	46,886,020	379,339	35.558.711	30,021,616	537,000	5,487	160,761,886
1927–28(*a*) ..	26,927,100	26,160,814	3,777,000	24,066,012	35,134,156	672,000	..	116,737,082

(*a*) Preliminary figures.

The area devoted to the production of wheat for grain reached its maximum in 1915–16, when 12,484,512 acres were sown, largely as the result of a special war effort. After that year, however, there was a serious decline, brought about by war conditions and unfavourable seasons, and the area in 1919–20 fell to 6,419,160 acres, or only half that of 1915–16. The promise of remunerative Government guarantees, coupled with the prospects of high prices, was responsible for a marked advance in 1920–21, and the area was further extended during the next six years, the total gain for Australia since 1919–20 amounting to more than 5 million acres.

Although final figures for 1927–28 for all the States are not yet available, the data to hand indicate the total area under wheat for grain in Australia at about 12,263,979 acres, an increase of 600,000 acres on the previous year's figure. The season opened favourably, but the absence of rain at the critical period reduced the yield to 116,737,082 bushels, the yield per acre declining to 9.52 bushels.

The harvest of 179,065,703 bushels reaped in 1915–16 represents the maximum production of wheat in Australia. The annual production during the seasons 1917–18 to 1926–27 averaged 118,558.262 bushels, and the extent to which this average may be exceeded during any year depends in a great measure on seasonal conditions. For the last eight seasons the yield has exceeded 100 million bushels, the average for the period being 133,000,000 bushels. This is the first occasion on which such a succession of good harvests has occurred, and emphasizes clearly the value of bare-fallowing, seed selection, and the application of manures. It is the considered opinion of agricultural experts that the improved cultural methods practised by modern wheat-growers preclude the possibility of absolute failure of this crop.

(ii) *Average Yields.* In the next table will be found the average yield of wheat per acre in each of the last five seasons, and for the decennium 1917–27 :—

WHEAT.—YIELD PER ACRE, 1922–23 TO 1926–27.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Fed. Cap. Ter.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1922–23 ..	9.74	13.50	12.91	11.73	8.92	22.56	13.85	11.21
1923–24 ..	11.26	15.40	4.76	14.29	11.42	21.07	15.93	13.10
1924–25 ..	16.83	17.51	14.70	12.21	12.79	17.86	20.49	15.20
1925–26 ..	11.56	11.64	11.89	11.60	9.69	20.72	18.28	11.22
1926–27 ..	14.13	16.08	6.65	12.84	11.68	23.15	12.53	13.75
Average 10 seasons, 1917–27	12.36	14.35	13.46	12.01	10.29	19.52	16.49	12.48

As the above figures show, there were considerable variations in the average yields, chiefly due to the vagaries of the seasons. Considerable improvement has been shown in the average yields for the past three decades, the figures being 8.54, 11.13, and 12.48 bushels per acre respectively. The increased yields of the later years are principally due to the better cultural methods employed in wheat farming. The excellence of the 1920–21 and 1924–25 seasons is reflected in the splendid averages obtained in those years, the average of the former year, viz., 16.08 bushels having been exceeded only once by the 16.35 bushels reaped as far back as 1866, when less than 1,000,000 acres were sown in relatively fertile areas.

(iii) *Relation to Population.* During the seasons embraced in the following table, the Australian production of wheat per head of population has varied between 19 bushels in 1925–26 and 28 bushels in 1924–25. The State in which wheat growing occupies the most important position relatively to population is Western Australia, which in 1926–27 had a yield averaging 79 bushels per head. Queensland and Tasmania are the States in which the average production of wheat per head is least, the quantity raised being generally below that required for local consumption. Particulars for the past five seasons are as follows :—

WHEAT.—YIELD PER 1,000 OF POPULATION, 1922–23 TO 1926–27.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Fed. Cap. Ter.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1922–23 ..	13,190	22,448	2,382	56,089	40,329	2,602	2,806	19,430
1923–24 ..	15,013	23,253	300	65,845	53,475	1,395	1,793	21,739
1924–25 ..	26,504	28,583	3,329	56,691	65,602	1,062	4,858	28,107
1925–26 ..	14,706	17,372	2,292	51,852	55,003	1,823	1,240	19,019
1926–27 ..	20,178	27,389	430	62,781	79,266	2,501	1,115	26,309

The normal annual consumption of wheat in Australia, exclusive of the requirements for seed, poultry and other live stock, is 306 lb. (5.11 bushels) per head of population.

2. Australian and Foreign Wheat Yields.—(i) *Average Yield.* The next table gives the average return per acre in the principal wheat-growing countries of the world, ranging from a maximum in Denmark of 40½ bushels per acre to a minimum in the Union of South Africa of 8½ bushels per acre. Australia, with approximately 13½, occupies a relatively subordinate position, but in comparison with the yields obtained in those countries where wheat is extensively grown the results obtained in Australia are very satisfactory. Germany, with 25.07 bushels; France, 19.82 bushels; Canada, 16.92 bushels; Italy, 16.22 bushels; and United States, 14.47 bushels, exceed the Australian average, but the latter is in excess of the yields obtained in the Soviet Republics, India, Argentine, Spain, and Rumania.

WHEAT.—YIELD PER ACRE, VARIOUS COUNTRIES, 1922 TO 1926.

Country.	Average Yield in Bushels per acre. Average, 1922–1924.	1926.	Country.	Average Yield in Bushels per acre. Average, 1922–1924.	1926.
Denmark	40.51	34.86	Lithuania ..	15.79	13.81
Netherlands ..	37.32	41.63	Korea	(a) 14.75	11.74
Belgium	34.01	36.12	Bulgaria ..	14.62	15.87
United Kingdom ..	32.40	30.87	United States of America ..	14.47	14.72
Switzerland ..	29.05	31.70	Jugo-Slavia ..	13.64	17.10
New Zealand ..	27.92	34.09	**Australia** ..	**13.24**	**13.75**
Sweden	26.29	32.46	Spain	12.97	13.61
Japan	25.10	24.82	Rumania ..	12.52	13.49
Germany.. ..	25.07	24.12	Argentine Republic	12.31	12.09
Egypt	24.94	24.30	Cyprus	12.24	8.49
Norway	24.03	26.58	India	12.18	10.66
Czecho-Slovakia ..	22.73	22.15	Greece	(c)11.56	9.69
France	19.82	17.87	Uruguay ..	11.18	10.37
Chile	18.41	15.50	Peru	10.72	(b)12.77
Austria	17.51	18.86	Portugal ..	9.84	11.38
Canada	16.92	18.10	French Morocco ..	9.09	8.05
Hungary ..	16.83	20.21	Soviet Republics	(b)8.29	11.73
Brazil	16.71	(d)17.38	Union of South Africa ..	8.28	(d)7.87
Italy	16.22	18.17			
Poland	16.11	17.31			

(a) Average for years 1923–1924. (b) Year 1924. (c) Average for years 1921–1923. (d) Year 1925.

(ii) *Total Production.* The latest available official statistics of the production of wheat in various countries are given in the following table :—

WHEAT.—YIELD IN VARIOUS COUNTRIES, 1922 TO 1926.

Country.	Yield in Bushels (,000 omitted). Average, 1922–1924.	1926.	Country.	Yield in Bushels (,000 omitted). Average, 1922–1924.	1926.
United States of America ..	838,222	832,319	French Morocco ..	20,535	20,584
Soviet Republics ..	(b)381,738	809,647	Belgium ..	12,332	12,801
Canada	378,667	416,138	Greece	(a)10,857	11,171
India	366,464	324,949	Mexico	10,767	10,245
France	266,691	231,770	Portugal ..	10,459	12,200
Argentine Republic	209,075	220,830	Uruguay ..	9,171	10,234
Italy	185,542	220,646	Sweden ..	9,116	12,363
Spain	134,787	146,601	Korea	(c)8,650	10,517
Australia ..	**133,002**	**160,762**	Austria	8,267	9,438
Germany.. ..	89,194	95,430	Denmark ..	7,980	8,767
Rumania ..	87,815	110,884	Syria	(b)6,651	13,940
United Kingdom ..	59,163	51,000	Union of South Africa ..	6,619	8,502
Hungary ..	54,783	74,909	Tunis	6,259	13,044
Jugo-Slavia ..	53,696	71,430	New Zealand ..	5,919	7,500
Poland	41,562	47,080	Netherlands ..	5,327	5,487
Egypt	37,163	37,208	Brazil	3,727	4,145
Czecho-Slovakia ..	34,329	34,131	Lithuania ..	3,186	4,180
Bulgaria	34,082	41,065	Switzerland ..	3,023	4,027
Japan	29,970	28,431	Peru	2,886	(d)2,876
Chile	25,401	23,287	Cyprus	2,342	1,624
Algeria	23,595	23,551			

(a) Average for years 1921–1923. (b) Year 1924. (c) Average for years 1923–1924. (d) Year 1925.

NOTE.—The harvests reported above for 1926 relate to the year 1926 for the Northern, and 1926–27 for the Southern Hemisphere.

The complete compilation of the world's production of wheat is not possible owing to the failure of certain countries to report their harvests. The Institute of Agriculture, Rome, has, however, compiled figures obtained from all the producing countries reporting, with the following results :—

WHEAT.—WORLD'S PRODUCTION (*a*), 1909–13 TO 1926.

Years.	Area.	Yield.	Yield per acre.
	Acres.	Bushels.	Bushels.
Average, 1909–1913 ..	270,266,000	3,779,479,000	13.98
1923	261,965,000	3,904,988,000	14.91
1924	261,798,000	3,467,944,000	13.25
1925	279,599,000	4,066,267,000	14.54
1926	295,744,000	4,183,403,000	14.15
Average, 1923–1926 ..	274,776,000	3,905,650,000	14.21

(*a*) From countries reporting.

It is stated in the Report of the Institute that if all countries for which progress data are lacking were taken into account, the world's total production of wheat may be approximately estimated at 4,500 million bushels.

The total area harvested in 1926 again shows an increase on the figures for the previous year. Europe, mainly on account of the Soviet Union, was most largely responsible for this increase, followed by the United States of America and Canada. The area sown was the largest since the war, and exceeded the pre-war average by more than 25,000,000 acres. Nevertheless, in comparison with the pre-war period, areas sown to wheat are still 5 per cent. lower in European Countries and 7 per cent. lower in the Soviet Union, though considerably more in other continents, especially in North America, Argentina and Australia.

The increase in sowing was accompanied by favourable weather conditions in the Soviet Union, United States of America, Canada, Argentine Republic and Australia, and exceptionally heavy yields were obtained in these countries. In Europe, India and Africa the yields were not so satisfactory, but the total world output was the greatest since the war, and exceeded the 1909–13 average by 404,000,000 bushels.

The Australian contribution to the world's production shown above during the past four years amounted to slightly more than 3½ per cent.

3. **Prices of Wheat.**—(i) *British Wheat.* Since the United Kingdom is the largest importer of Australian wheat, the price of wheat in the British markets is a matter of prime importance to the local producer. The table below gives the average prices per Imperial quarter realized for British grown wheat :—

BRITISH WHEAT.—PRICES PER QUARTER, 1861 TO 1927.

Year.	Average for Year.	Highest Weekly Average.	Lowest Weekly Average.	Year.	Average for Year.	Highest Weekly Average.	Lowest Weekly Average.
	s. d.	s. d.	s. d.		s. d.	s. d.	s. d.
1861 ..	55 4	61 6	50 0	1920 ..	80 10	90 11	72 6
1871 ..	56 8	60 0	52 6	1921 ..	71 6	89 10	44 0
1881 ..	45 4	55 2	40 9	1922 ..	47 10	56 3	37 5
1891 ..	37 0	41 8	32 3	1923 ..	42 2	49 3	37 6
1901 ..	26 9	27 8	25 8	1924 ..	49 3	56 1	41 5
1911 ..	31 8	33 4	30 0	1925 ..	52 2	59 3	43 11
1918 ..	72 10	74 5	71 2	1926 ..	53 3	62 2	47 6
1919 ..	72 11	73 4	72 5	1927 ..	49 3	54 8	42 2

(ii) *Australian Export Values.* In the next table will be found a statement of the export values of Australian wheat during each of the last five years :—

AUSTRALIAN WHEAT.—EXPORT VALUES, 1923–24 TO 1927–28.

Heading.	1923–24.	1924–25.	1925–26.	1926–27.	1927–28.
	s. d.	s. d.	s. d.	s. d.	s. d.
Price per bushel	4 8	6 8	6 4	5 7	5 6

The export values here shown are the values for the successive years in the principal markets of Australia.

4. Imports and Exports of Wheat and Flour.—(i) *Quantities.* The table hereunder shows the imports, exports, and net exports of wheat and flour from 1922–23 to 1926–27. For the sake of convenience, flour has been expressed at its equivalent in wheat, 1 ton of flour being taken as equal to 48 bushels of grain. In ordinary seasons the Australian imports of wheat and flour are negligible. During the past five years the exports ranged between 50,446,320 bushels in 1922–23 and 125,044,344 bushels in 1924–25, the net exports for the period averaging 87,159,926 bushels.

WHEAT AND FLOUR.—IMPORTS AND EXPORTS, AUSTRALIA, 1922–23 TO 1926–27.

Year.	Imports.			Exports.			Net Exports.
	Wheat.	Flour.	Total.	Wheat.	Flour.	Total.	
	Bushels.	Eq. Bushels.(a)	Bushels.	Bushels.	Eq. Bushels.(a)	Bushels.	Bushels.
1922–23	15,288	2,112	17,400	31,510,272	18,936,048	50,446,320	50,428,920
1923–24	203	1,920	2,123	59,910,480	24,537,168	84,447,648	84,445,525
1924–25	42	2,784	2,826	103,538,088	21,506,256	125,044,344	125,041,518
1925–26	13	3,456	3,469	54,227,728	24,049,536	78,277,264	78,273,795
1926–27	257	3,456	3,713	73,925,315	23,686,272	97,611,587	97,607,874

(a) Equivalent in bushels of wheat.

(ii) *Destination of Exported Breadstuffs.* In the next two tables will be found a list of the principal countries to which Australia exported wheat and flour during each year of the period 1922–23 to 1926–27. The countries are as shown in the Australian Customs returns, but wheat ships are frequently instructed to call for orders at various ports, and the countries to which these ports belong cannot, therefore, always be considered as the ultimate destination of the whole of the wheat said to be exported to them.

WHEAT.—EXPORTS, AUSTRALIA, 1922–23 TO 1926–27.

Country to which Exported.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.	Total for Five Years.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
United Kingdom	10,762,600	23,017,707	39,356,580	22,319,823	26,510,696	121,967,406
Italy	11,647,165	6,483,732	15,560,605	4,642,202	10,316,509	48,650,213
Japan ..	3,711,211	13,067,907	7,018,627	10,861,863	4,298,567	38,958,175
France ..	1,284,924	3,562,313	14,580,859	53,865	7,254,063	26,736,024
Union of South Africa ..	2,545,162	3,721,697	3,674,773	3,117,007	2,005,233	15,063,872
Belgium ..	178,930	622,283	4,440,158	1,349,347	4,782,332	11,373,050
Egypt ..	38,783	1,339,707	1,887,777	668,288	4,625,270	8,559,825
Germany ..	397	110,770	3,061,956	941,252	2,132,607	6,246,976
Netherlands ..	..	142,753	3,297,382	2,211,050	3,379,723	9,030,908
New Zealand ..	..	1,247,362	2,682,908	2,533,847	1,040,672	7,504,789
India	..	..	..	1,326,860	2,713,827	4,040,687
Peru	167,110	..	528,367	1,635,802	854,747	3,186,026
Sweden ..	412,547	1,304,445	1,040,585	129,397	168,000	3,054,974
Norway ..	117,012	106,415	326,037	225,877	..	775,341
China ..	..	..	..	985,865	..	985,865
Canary Islands(a)	..	..	470,527	..	..	470,527
Other Countries	644,493	5,183,389	5,610,953	1,225,383	3,843,070	16,507,288
Total ..	31,510,334	59,910,480	103,538,088	54,227,728	73,925,316	323,111,946

(a) For orders.

The exports of flour during the same period and the principal countries of destination were as follows :—

FLOUR.—EXPORTS, AUSTRALIA, 1922–23 TO 1926–27.

Country to which Exported.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.	Total for Five Years.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
Egypt	127,072	182,938	172,416	194,909	185,392	862,727
United Kingdom	83,804	92,425	103,817	70,537	76,167	426.750
Netherlands East Indies ..	50,899	49,262	44,875	66,868	64,648	276,552
Malaya (British)	32,619	33,683	29,408	48,910	42.451	187,071
Union of South Africa ..	39,250	37,685	25,475	22,780	18,912	144,102
Philippine Islands	10,292	13,012	10,016	11,389	8,754	53,463
Ceylon	7,681	10,142	10,416	18,130	16,060	62,429
Hong Kong	6,318	11,739	13,247	9,703	3,966	44,973
Mauritius	8,757	8,569	6,496	3,990	7,781	35,593
Japan	1.664	15,430	156	732	711	18,693
Malta	6,133	5,631	1,967	4,817	5,407	23,955
New Caledonia	3,517	3,765	3,522	3,911	3,319	18,034
Portuguese East Africa ..	3,475	2,963	2,621	5,441	5,802	20,302
China	260	12,905	219	132	306	13,822
New Zealand	84	294	4,258	12,363	28,383	45,382
Fiji	2,602	3,024	2,989	4,039	3,567	16,221
French Indo-China	1,826	1,884	1,295	3,421	1,719	10,145
India	1,063	130	470	1,584	226	3,473
Papua	378	780	912	946	788	3,804
Italy	112	2,025	156	..	..	2,293
Other Countries	6,695	22,905	13,316	16,430	19,105	78.451
Total	394,501	511,191	448,047	501.032	493,464	2,348,235

For the five years under review the export of wheat to the United Kingdom amounted to 121,967,406 bushels, or 37.75 per cent. of the total export for the period, while the export of flour to the same destination aggregated 426,750 tons, or 18.17 per cent. of the total export. The country to which the largest consignments of flour were made during the last quinquennium was Egypt, followed by the United Kingdom, Netherlands East Indies, Malaya (British), and the Union of South Africa.

(iii) *Exports of Wheat and Flour.* From the foregoing returns it will be seen that the quantity of wheat exported in the form of flour during the past five years represents, on the average, about 26 per cent. of the total equivalent in wheat exported as wheat or flour from Australia.

A point of some interest in connexion with the export of wheat, and one which bears also on the proportion of wheat and flour exports just referred to, is that concerning the quantity of phosphoric acid which this export has the effect of removing from Australia, and the necessity which exists for the return to the soil of this substance in some form.

According to an estimate furnished by the chemist to the New South Wales Department of Agriculture (F. B. Guthrie, Esq., F.C.S., &c.), the proportions of milled product from a bushel (60 lb.) of wheat are, approximately, 42 lbs. of flour, 9 lbs. of bran, and 9 lbs. of pollard, while the percentage of phosphoric acid contained in these products is as follows :—

Flour	0.32 per cent., or	0.13 lb. per bushel.
Bran	3.00 „	0.27 „
Pollard	0.90 „	0.08 „

The total amount of phosphoric acid contained in a bushel of wheat, is, therefore, 0.48 lb., of which 0.13 lb. is in the flour and 0.35 lb. in the offal.

During the last ten years the net exports from Australia of wheat and its milled products have amounted to 649,866,759 bushels of wheat, 4,312,405 tons of flour, and 9,866,975 bushels of bran, pollard, and sharps. On the basis of the figures quoted above this export would contain no less than 342,683,088 lbs. of phosphoric acid, the value of which as a fertilizer would amount to approximately four million pounds sterling.

5. **Local Consumption of Wheat.**—The estimated consumption of wheat for food and for seed purposes in Australia during the past ten years is given in the following tables:—

WHEAT.—HUMAN CONSUMPTION, AUSTRALIA, 1917-18 TO 1926-27.

Year.	Flour Milled.	Net Exports of Flour.		Net Quantity Available for Home Consumption.		Net Quantity Available per Head of Population.	
		Flour.	Flour in Biscuits Exported.	Flour.	Equivalent in Terms of Wheat.	Flour.	Equivalent in Terms of Wheat.
	Tons.	Tons.	Tons.	Tons.	Bushels.	Tons.	Bushels.
1917–18 ..	985,761	374,062	9,810	601,889	28,890,670	.1205	5.784
1918–19 ..	1,046,268	483,340	6,437	556,491	26,711,570	.1098	5.270
1919–20 ..	1,050,228	517,708	4,590	527,930	25,340,640	.1000	4.801
1920–21 ..	801,511	229,648	3,375	568,488	27,287,420	.1052	5.050
1921–22 ..	911,452	359,698	2,284	549,470	26,374,560	.0999	4.798
1922–23 ..	985,479	394,457	1,831	589,191	28,281,170	.1049	5.034
1923–24 ..	1,092,856	511,151	1,727	579,978	27,838,940	.1011	4.853
1924–25 ..	1,068,698	447,989	1,814	618,895	29,706,960	.1054	5.058
1925–26 ..	1,185,968	500,960	2,473	682,535	32,761,680	.1139	5.467
1926–27 ..	1,141,748	493,392	1,570	646,786	31,045,730	.1058	5.081
Aggregate 10 years	10,269,969	4,312,405	35,911	5,921,653	284,239,340	.1064	5.108

WHEAT USED FOR SEED.—AUSTRALIA, 1917 TO 1926.

Year.	Area for Grain and Hay.	Wheat for Seed Purposes.		
		Quantity.	Per Acre.	Per Head of Population.
	Acres.	Bushels.	Bushels.	Bushels.
1917	10,910,669	9,713,000	.890	1.949
1918	9,428,398	9,054,000	.960	1.782
1919	8,250,572	7,774,000	.942	1.466
1920	10,271,055	9,471,000	.922	1.750
1921	10,878,401	10,077,000	.926	1.847
1922	11,253,078	10,456,000	.929	1.878
1923	11,016,608	10,328,000	.937	1.816
1924	11,859,102	10,967,000	.925	1.890
1925	11,405,943	10,627,000	.932	1.774
1926	12,543,025	11,591,000	.924	1.897
Aggregate for 10 years ..	107,816,851	100,058,000	.928	1.798

In addition to the above, the quantity of grain fed to poultry and other live stock as well as that used as seed for green forage crops must be taken into consideration. These quantities vary from year to year according to the price of wheat and the nature of the season, and sufficient data are not available on which to base an annual estimate, but, taken over a period, the amount so consumed has been estimated to range from one half to one bushel per head of population per annum. The flour available for human consumption necessarily fluctuates from year to year coincident with stocks. In some years the flour available per head of population, after deducting net exports from the quantity milled, shows a substantial increase over the average for the previous year, this, however, being counterbalanced by a decline in the following year. The average quantity of flour consumed per annum for the ten years under consideration was 0.1064 tons per head of population, which, expressed in equivalent terms in wheat, represents 5.108 bushels. The estimates of quantity of grain used for seed purposes are based on data supplied by the Agricultural departments of the several States giving average quantities of seed used per acre for wheat sown either for grain or hay. The average annual quantity thus used during the ten years was 1.798 bushels per head of population, and 0.928 bushels or 56 lbs. per acre sown. For all purposes the consumption of wheat in Australia during the past six years averaged 42,913,000 bushels, or 7.38 bushels per head of the population.

6. **Value of the Wheat Crop.**—The estimated value of the wheat crop in each State and in Australia during the season 1926–27 is shown below :—

WHEAT.—VALUE OF CROP (*a*), 1926–27.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	£	£	£	£	£	£	£	£
Aggregate value..	12,139,510	12,307,580	126,841	9,408,242	8,318,489	150,720	1,410	42,452,792
Value per acre ..	£3/12/5	£4/4/5	£2/4/5	£3/8/0	£3/4/8	£6/10/0	£3/4/5	£3/12/8

(*a*) Exclusive of the value of straw.

7. **Voluntary Wheat Pools.**—Reference to the operations of the Voluntary Wheat Pools in the various States during 1927–28 will be found in the Appendix at the end of this volume.

§ 5. Oats.

1. **Progress of Cultivation.**—(i) *Area and Yield.* Oats came next in importance to wheat amongst the grain crops cultivated last season, but while wheat grown for grain accounted for 65.76 per cent., oats represented only 4.75 per cent, of the area under crop in Australia. The decrease in cultivation of oats for the last five years is shown in the table hereunder, and more fully in the graphs herein :—

OATS.—AREA AND YIELD, 1922–23 TO 1926–27.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Fed. Cap. Ter.	Australia.
				AREA.				
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1922–23	73,635	492,356	1,216	173,716	214.269	58,813	371	1,014,376
1923–24	86,402	520,654	216	176,299	241,608	51,460	291	1,076,930
1924–25	122,994	517,229	4,010	155,214	318,982	46,175	523	1,165,127
1925 26	100,652	437,696	1,293	158,062	278,344	36,741	445	1,013,233
1926–27	101,450	303.424	210	152,178	234,826	48,361	665	844,114
				YIELD.				
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1922–23	1,243,198	8,093,459	19,499	1,681.783	2,261,863	1,674,751	7,602	14,982,155
1923 -24	1,564,970	9,366,205	2,427	2,157,938	2,846,670	1,359,785	5,330	17,303,325
1924–25	2,500,951	9,572,003	63.912	1,939,415	4,241,074	1,065,933	10,449	19,393,737
1925–26	1,607.520	4,998,165	14,546	1,808,443	2,939,380	835,473	8,130	12,211,657
1926–27	1,890,746	4,884,006	1,674	1,713,337	2,716,436	1,357.000	8,004	12,571,203

The oat crop exhibited considerable variation during the past decennium, ranging from 10,387,431 bushels in 1917–18 to 19,393,737 bushels in 1924–25, with an average around 14,000,000 bushels. The demand for the grain for oatmeal is limited to about 2,000,000 bushels annually. It is mainly used as feed grain, and its value, particularly in good seasons, is not sufficient to warrant the increase in cultivation which may be expected when oats are more generally marketed through live stock and better prices thereby realized than those now offering on the local market.

The principal oat-growing State is Victoria, which produces on the average more than half the total quantity of oats grown in all States. For Australia as a whole the record yield of oats was obtained during 1924–25, when 19,393,737 bushels were harvested.

(ii) *Average Yield.* The average yield per acre of oats varies considerably in the different States, being highest in Tasmania and lowest in South Australia. Particulars as to average yield in each of the last five seasons, and for the decennium 1917 to 1927 are given in the succeeding table :—

OATS.—AVERAGE YIELD PER ACRE, 1922–23 TO 1926–27.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1922–23	16.88	16.44	16.04	9.68	10.56	28.48	20.49	14.77
1923–24	18.11	17.99	11.24	12.24	11.78	26.42	18.32	16.07
1924–25	20.33	18.51	15.94	12.50	13.30	23.08	19.98	16.65
1925–26	15.97	11.42	11.25	11.44	10.56	22.74	18.27	12.05
1926–27	18.10	16.10	7.97	11.26	11.57	28.06	12.04	14.89
Average for 10 seasons 1917–27	16.96	17.01	16.59	11.07	11.55	25.82	16.91	15.21

The smallest average yield per acre ever recorded for Australia was that experienced in the abnormally dry season 1914–15, viz., 5.60 bushels, while the largest in the past ten years was that of the season 1920–21, amounting to 19.77 bushels per acre.

(iii) *Relation to Population.* The State in which oat production occupies the most important position in relation to population is Western Australia, the yield for that State representing about 8 bushels per head during the last five years, as compared with 2.61 bushels per head for Australia as a whole. Particulars for the seasons 1922–23 to 1926–27 are furnished in the succeeding table :—

OATS.—YIELD PER 1,000 OF POPULATION, 1922–23 TO 1926–27.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1922–23	572	5,090	25	3,277	6,583	7,650	2,973	2,660
1923–24	708	5,762	3	4,112	8,046	6,207	2,033	3,009
1924–25	1,109	5,776	76	3,601	11,647	4,893	3,485	3.302
1925–26	699	2,968	17	3,278	7,898	3,850	2,066	2,038
1926–27	805	2,853	2	3,025	7,172	6,319	1,627	2,057

2. Comparison with Other Countries.—(i) *Total Production.* A comparison of the Australian production of oats with that of the leading oat-producing countries of the world is furnished in the following table :—

OATS.—PRODUCTION IN VARIOUS COUNTRIES, 1922 TO 1926.

Country.	Yield in Bushels (000 omitted).		Country.	Yield in Bushels (000 omitted).	
	Average, 1922–1924.	1926.		Average, 1922–1924.	1926.
United States of America	1,081,929	1,002,995	Hungary	17,451	19,842
Canada	414,007	325,903	Australia	17,226	12,571
Soviet Republics	(*b*)407,266	722,797	Jugo-Slavia	15,953	19,716
Germany	289,843	348,582	Netherlands	15,673	18,024
France	248,201	291,299	Latvia	14,201	15,207
Poland	155,058	168,090	Japan	9,156	8,611
United Kingdom	131,357	141,833	Algeria	9,055	6,954
Czecho-Slovakia	65,986	76,053	Norway	8,539	10,666
Sweden	60,672	68,847	Estonia	7,380	7,336
Rumania	54,502	63,881	Portugal	6,994	3,782
Argentine Republic	50,637	53,021	Bulgaria	6,863	5,930
Denmark	49,258	48,267	Union of South Africa	(*a*)5,447	7,760
Belgium	33,879	40,583	New Zealand	4,615	4,777
Irish Free State	29,931	35,769	Greece	(*c*)4,264	4,445
Italy	27,624	32,518	Korea	3,326	3,437
Spain	27,152	30,151	Chile	2,576	3,311
Finland	22,240	32,668	Switzerland	2,192	2,486
Lithuania	18,748	17,607	Uruguay	1,864	1,148
Austria	17,873	23,964	Tunis	1,369	1,709

(*a*) Average years 1921–1923. (*b*) Year 1924. (*c*) Average years 1922–1923.

(ii) *Yield per Acre.* The average yield per acre of oats is very low in Australia compared with other countries where its cultivation is more extensive. Arranging the countries contained in the foregoing table according to the magnitude of average yield for the years specified, the results are as follows :—

OATS.—YIELD PER ACRE, VARIOUS COUNTRIES, 1922 TO 1926.

Country.	Yield in Bushels per acre.		Country.	Yield in Bushels per acre.	
	Average, 1922–1924.	1926.		Average, 1922–1924.	1926.
Belgium	50.18	60.75	Austria	23.64	30.84
Denmark	43.71	46.07	Lithuania	23.55	18.68
Switzerland	43.27	49.07	Italy	23.38	26.43
Netherlands	40.91	47.36	Hungary	22.23	29.22
United Kingdom	38.59	45.41	Finland	21.55	29.97
Irish Free State	38.11	55.25	Argentine Republic	18.96	23.89
Germany	34.94	40.58	Latvia	18.88	19.18
New Zealand	33.64	43.04	Bulgaria	18.80	18.60
Sweden	33.01	37.74	Estonia	18.65	18.71
Chile	32.82	34.06	Jugo-Slavia	17.20	22.65
Norway	32.55	44.22	Spain	17.17	16.19
Japan	32.40	32.01	Rumania	16.90	23.97
Czecho-Slovakia	32.00	36.52	**Australia**	**15.87**	**14.89**
France	29.11	33.57	Uruguay	15.52	11.41
Canada	28.61	25.58	Algeria	15.05	11.19
Greece	(*a*)26.57	16.42	Soviet Republics	(*b*)14.07	20.33
United States of America	26.11	22.59	Portugal	13.73	7.57
Poland	25.17	26.11	Korea	12.19	12.42

(*a*) Average years 1922–1923. (*b*) Year 1924.

3. **World's Production.**—The production of oats in the world for the year 1926, as reported by the International Institute of Agriculture, amounted to 3,686 millions of bushels. The season was not as favourable as the previous one, and the production was slightly less despite an increase in the acreage sown. In the pre-war years 1909 to 1913 the production averaged 3,613 millions of bushels from an average area of 142,870,000

acres. Subsequently the area declined in Europe, but a considerable increase was recorded in North America, with the result that the area in 1926 amounted to 144,500,000 acres.

4. **Price of Oats.**—The average wholesale prices of oats in the markets of the several capitals for the year 1926–27 are given in the following table :—

OATS.—AVERAGE WHOLESALE PRICES, 1926–1927.

Particulars.	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Average price per bushel ..	4 9	3 6	..	2 9	2 8	3 10

5. **Imports and Exports.**—The production of oats in Australia has not yet reached sufficient proportions to admit of a regular export trade; in fact in certain years the imports have exceeded the exports, notably in 1903, 1906, 1908, 1910, in each of the four years prior to 1916–17, in 1922–23 and again in 1925–26 and 1926–27. The quantities and values of oats imported into and exported from Australia during the years 1922–23 to 1926–27 are given hereunder :—

OATS.—IMPORTS AND EXPORTS, AUSTRALIA, 1922–23 TO 1926–27.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Bushels.	£	Bushels.	£	Bushels.	£
1922–23 ..	557,523	90,255	35,895	7,506	–521,628	–82,749
1923–24 ..	108,260	18,624	190,453	41,647	82,193	23,023
1924–25 ..	1,723	482	219,278	42,255	217,555	41,773
1925–26 ..	266,103	49,927	76,978	15,844	–189,125	–34,083
1926–27 ..	197,070	40,553	137,768	26,301	–59,302	–14,252

NOTE.—(–) signifies net import.

The principal country from which imports of oats have been obtained is New Zealand, while the principal countries to which oats were exported during the period under review were New Zealand, Malaya (British), Ceylon, and Mauritius.

6. **Oatmeal, etc.**—The production of oatmeal in Australia during 1926–27 amounted to 315,680 cwts., practically the whole of which is consumed locally. Oversea trade in this and similar products is small, the importations of oatmeal, wheatmeal and rolled oats during 1926–27 amounting to 240,398 lbs., while the exports totalled 591,221 lbs.

7. **Value of Oat Crop.**—The estimated value of the oat crop of the several States of Australia for the season 1926–27 is as follows :—

OATS.—VALUE OF CROP, (*a*) 1926–27.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	£	£	£	£	£	£	£	£
Aggregate value..	409,670	854,701	488	239,159	415,954	243,510	1,730	2,165,212
Value per acre ..	£3/18/5	£2/16/4	£2/6/6	£1/11/5	£1/15/5	£5/0/8	£2/12/0	£2/11/4

(*a*) Exclusive of the value of straw.

§ 6. Maize.

1. **States Growing Maize.**—Maize is grown for grain chiefly in New South Wales and Queensland, the area so cropped in these States during the season 1926–27 being 266,054 acres, or nearly 93 per cent. of the total for Australia. Of the balance, Victoria contributed 20,046 acres, South Australia 2 acres, Western Australia 32 acres, Northern Territory 40 acres, and the Federal Capital Territory 4 acres. The climate of Tasmania is unsuitable for the growing of maize for grain. In all the States, the crop is grown to a greater or less extent for green forage, particularly in connexion with the dairying industry.

2. Progress of Maize-growing.—(i) *Area and Yield.* Notwithstanding its valuable properties and its pre-eminence as the world's most extensively grown cereal, the cultivation of maize has decreased in Australia by nearly 33,000 acres during the past decennium. The decline in the sowing of this cereal in New South Wales was mainly responsible for the Australian decrease, though in Queensland the area sown was over 4,000 acres less. An increase of 5,000 acres was recorded for Victoria. The maximum area sown to maize was 414,914 acres, as far back as 1910–11, this acreage being considerably in excess of the average planted during the last ten years, viz. 308,558 acres. The area and yield of maize for grain in each State are given in the following table for the last five years. The fluctuations from year to year are shown more fully on the graph herein.

MAIZE.—AREA AND YIELD, 1922–23 TO 1926–27.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Nor. Ter.	Fed. Cap. Ter.	Australia.
				AREA.				
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1922–23	138,169	25,846	149,048	116	23	..	..	313,202
1923–24	166,933	29,104	120,092	94	43	..	41	316,307
1924–25	146,564	23,126	229,160	7	71	21	..	398,949
1925–26	120,955	21,913	154,252	2	8	10	..	297,140
1926–27	128,512	20,046	137,542	2	32	40	4	286,178
				YIELD.				
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1922–23	3,287,500	879,915	3,217,848	2,716	335	..	..	7,388,314
1923–24	4,621,950	1,464,731	2,024,902	1,266	834	..	1,050	8,114,733
1924–25	4,208,200	891,987	7,330,821	276	333	420	..	12,432,037
1925–26	3,278,350	768,761	3,384,172	51	227	..	..	7,431,561
1926–27	3,625,410	685,407	2,658,895	99	342	..	120	6,970,273

The maximum production of maize in Australia was recorded in 1910–11, when the harvest amounted to 13,000,000 bushels. This figure was considerably in excess of the yields during recent years, save that of 1924, when a bountiful harvest in Queensland increased the Australian total to 12,500,000 bushels. Nevertheless, the average for the past decennium was only 8,000,000 bushels.

A maize reaper-thresher, invented and manufactured in Australia, and an imported maize picker and husker were used in the maize fields of Queensland during recent seasons, and proved most suitable for the work for which they were designed. The perfecting of a machine for harvesting and threshing maize is a matter of very great importance in the development of the industry.

(ii) *Average Yield.* The following table gives particulars of the average yield per acre of the maize crops of the States for the seasons 1922–23 to 1926–27, and for the decennium 1917–27 :—

MAIZE.—AVERAGE YIELD PER ACRE, 1922–23 TO 1926–27.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	N. Ter.	Fed. Cap. Ter.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1922–23	23·79	34·04	21·59	23·41	14·57	..	..	23·59
1923–24	27·69	50·33	16·86	13·47	19·40	..	25·61	25·65
1924–25	28·71	38·57	31·99	39·43	4·70	20·00	..	31·16
1925–26	27·10	35·08	21·94	25·50	28·38	..	..	25·01
1926–27	28·21	34·19	19·33	49·50	10·69	..	30·00	24·36
Average for 10 seasons 1917–27	26·51	40·32	23·04	17·10	11·03	9·68	24·23	25·91

With the exception of Canada, the average yield of maize per acre in Victoria is the largest in the world. This is due, in large measure, to the fact that the area under maize in that State is comparatively small and is situated in districts peculiarly suited to its growth. The average yield in New South Wales exceeds that obtained in Queensland.

(iii) *Relation to population.* During the past five seasons the Australian production of maize has averaged just under 1½ bushels per head of population, while the average for Queensland, the State in which the production per head is highest, amounted to approximately 4½ bushels. Details for the several States during the past five seasons are as follow :—

MAIZE.—YIELD PER 1,000 OF POPULATION, 1922–23 TO 1926–27.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	N. Ter.	Fed. Cap. Ter.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1922–23 ..	1,513	553	4,082	5	1	..	..	1,312
1923–24 ..	2,092	901	2,496	2	2	..	400	1,411
1924–25 ..	1,866	538	8,781	1	1	117	..	2,117
1925–26 ..	1,426	457	3,930	..	1	..	..	1,240
1926–27 ..	1,544	400	3,013	..	1	..	24	1,141

3. **Australian and Foreign Maize Production.**—(i) *Total Yield.* The United States of America is the most important maize-producing country of the world. On the average, approximately 100,000,000 acres are planted annually in that country, and nearly 3,000,000,000 bushels are reaped, representing about 75 per cent. of the world's production. Of the huge quantities raised, about 85 per cent. is fed to live stock on farms, 10 per cent. is used for human food, and only a very small fraction, viz., 1½ per cent., is exported. The yields of the various countries are as follows :—

MAIZE.—PRODUCTION IN VARIOUS COUNTRIES, 1922 TO 1926.

Country.	Yield in Bushels (000 omitted). Average, 1922–1924.	Yield in Bushels (000 omitted). 1926.	Country.	Yield in Bushels (000 omitted). Average 1922–1924.	Yield in Bushels (000 omitted). 1926.
United States of America ..	2,793,850	2,645,009	Portugal ..	(b)11,086	12,275
Argentine Republic	203,503	320,851	Czecho-Slovakia	10,248	10,452
Brazil	173,661	(c)162,413	**Australia** ..	**9,312**	**6,970**
Rumania ..	142,160	239,494	Salvador ..	(a)7,836	(d)10,629
Jugo-Slavia ..	107,773	134,250	French Equatorial and West Africa	7,750	(c)9,291
Soviet Republics	(c)94,299	145,871	Greece ..	(b)7,659	(c)7,893
Mexico	91,976	81,768	Belgian Congo ..	7,414	(c)8,464
Italy	90,560	118,089	Madagascar ..	(b)6,525	4,034
India	(b)86,480	(c)74,960	Japan	6,297	(c)6,627
Egypt	67,049	(c)77,180	Guatemala ..	5,933	(c)4,630
Dutch East Indies	58,930	(c)63,469	Uruguay ..	(f)5,550	4,942
Hungary ..	51,955	76,544	French Indo-China	(e)5,413	(c)5,598
Union of South Africa ..	(b)48,355	67,500	Rhodesia ..	4,869	5,179
Spain	25,520	17,186	French Morocco ..	4,031	5,512
Bulgaria ..	23,203	29,018	Poland ..	3,589	4,166
Philippine Islands	16,896	17,517	Austria ..	3,549	3,825
France	14,459	12,423	Korea	2,694	2,831
Canada	13,128	7,815	Kenya	2,672	(c)3,309
			Paraguay ..	1,675	(c)2,280

(a) Average, years 1920–1922. (b) Average, years 1921–1923. (c) Year 1925. (d) Year 1924. (e) Average, years 1923–1925. (f) Average, years 1922–1923.

(ii) *Yield per Acre.* The average yield per acre of maize in Australia during 1926–27 was 24.36 bushels, which may be regarded as satisfactory when compared with those of other maize-producing countries, the yields per acre for which are shown in the following table :—

MAIZE.—YIELD PER ACRE IN VARIOUS COUNTRIES, 1922 TO 1926.

Country.	Average Yield per acre in Bushels.		Country.	Average Yield per acre in Bushels.	
	Average, 1922–1924.	1926.		Average, 1922–1924.	1926.
Canada	42.30	37.26	Rhodesia ..	18.08	18.83
Belgian Congo ..	35.03	(c)36.06	Greece	(e)17.88	(g)21.86
Egypt	34.81	(c)37.17	France	17.48	14.90
United States of America ..	27.23	26.58	Paraguay ..	16.90	(c)19.97
Australia	**27.16**	**24.36**	French Indo-China	(d)16.85	(c)17.43
Kenya	25.61	(c)21.23	Bulgaria ..	16.81	19.73
Czecho-Slovakia ..	25.08	26.94	Salvador ..	(f)16.67	(d)16.67
Argentine Republic	23.96	35.41	Rumania ..	16.48	23.88
Italy	23.82	31.33	Portugal ..	(e)14.94	(g)13.60
Hungary ..	23.63	29.09	Guatemala ..	13.70	(c)12.05
Brazil	23.48	(c)25.78	Philippine Islands	12.50	(c)13.45
Jugo-Slavia ..	22.72	27.24	Mexico	11.97	10.93
Spain	21.95	17.09	Korea	11.75	11.52
Madagascar ..	(a)21.83	19.12	India	(e)11.61	(d)8.61
Japan	21.02	(d)18.90	Union of South Africa ..	(e)11.24	(d)13.73
Austria	21.01	25.17	Uruguay ..	(b)10.85	12.62
Poland	19.18	21.36	Dutch East Indies	7.94	(c)16.07
Soviet Republics ..	(d)18.68	20.73	Basutoland ..	7.72	(c)5.30
French Equatorial and West Africa	18.13	(c)19.09	French Morocco ..	7.47	9.80

(*a*) Average years 1923–1925. (*b*) Years 1922–1923. (*c*) Year 1925. (*d*) Year 1924. (*e*) Average, years 1921–1923. (*f*) Years 1920–1922. (*g*) Year 1923.

4. **World's Production.**—The maize harvest in 1925 was one of the most abundant on record. In the United States of America, where the production normally provides about 75 per cent. of the world's output and in Argentina, the next largest producer, weather conditions were very favourable and large yields were reaped. The total world production in 1925 was greater than the exceptionally large harvest in 1923 and nearly 14 per cent. greater than the average for the pre-war period, 1909 to 1913. The total yields from 1909 to 1925 were as follows :—

Average 1909 to 1913, 4,119,000,000 bushels.
1923, 4,563,000,000 bushels.
1924, 3,855,000,000 „
1925, 4,685,000,000 „

Particulars for 1926 are not yet available for all countries.

5. **Price of Maize.**—The average wholesale price of maize in the Sydney market for each of the last five years is given in the following table :—

MAIZE.—AVERAGE PRICE, SYDNEY, 1922–23 TO 1926–27.

Particulars.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Average price per bushel ..	6 1	5 1	3 11	5 8	6 10

6. **Oversea Imports and Exports.**—The decline in the production of maize in Australia of late years has necessitated an average net annual import of more than 1,000,000 bushels during the past quinquennium, the bulk of the supplies being furnished by South Africa. Details of imports and exports for the years 1922–23 to 1926–27 are as follows :—

MAIZE.—IMPORTS AND EXPORTS, AUSTRALIA, 1922–23 TO 1926–27.

Year.	Imports.		Exports.		Net Imports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Bushels	£	Bushels.	£	Bushels.	£
1922–23 ..	1,198,673	264,758	8,427	2,736	1,190,246	262,022
1923–24 ..	2,572,809	515,468	37,918	9,524	2,534,891	505,944
1924–25 ..	480	242	2,554,052	511,921	– 2,553,572	– 511,679
1925–26 ..	1,562,454	323,486	54,720	14,734	1,507,734	308,752
1926–27 ..	1,173,514	277,821	2,477	890	1,171,037	276,931

NOTE.—(–) denotes net exports.

7. **Prepared Maize.**—A small quantity of corn-flour is imported annually into Australia, the principal countries of supply being the United Kingdom and the United States of America. During the year 1926–27 the imports amounted to 932,523 lb., and represented a value of £9,891. The exports from Australia are small, and amounted to only 13,937 lb., valued at £359 in 1926–27.

8. **Value of Maize Crop.**—The value of the Australian maize crop for the season 1926–27 has been estimated at £2,316,657, made up as follows :—

MAIZE.—VALUE OF CROP, 1926–27.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	F.C.T.	Australia.
	£	£	£	£	£	£	£
Aggregate value	1,238,690	194,199	883,529	37	162	40	2,316,657
Value per acre	£9/12/9	£9/13/9	£6/8/6	£18/10/0	£5/1/3	£10/0/0	£8/1/11

§ 7. Barley.

1. **Progress of Cultivation.**—(i) *Area and Yield.* The area under barley in Australia has fluctuated very considerably, but results for the last ten years reveal a marked advance. The average annual area sown for the decennium 1917 to 1927 amounted to 296,774 acres, which was nearly double the average of the previous ten-yearly period, i.e., 159,662 acres. Victoria was originally the principal barley growing State, but the rapid expansion of the cultivation of this crop in South Australia during recent years brought the latter State into the lead in 1913–14, and, during 1926–27, the area under barley in South Australia accounted for more than 69 per cent. of the Australian acreage. Victoria was next in importance with 24 per cent., leaving a small balance

of about 7 per cent. distributed among the other States. The figures here given relate to the areas harvested for grain ; small areas only are cropped for hay, while more considerable quantities are cut for green forage. These, however, are not included in this sub-section. The area and yield of barley for grain in the several States are shown in the following table for the last five years, while the progress since 1860 is illustrated in the graphs herein :—

BARLEY.—AREA AND YIELD, 1922–23 TO 1926–27.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
AREA.							
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1922–23 ..	3,899	102,773	5,292	215,283	9,243	5,706	342,196
1923–24 ..	4,350	56,564	665	184,286	8,673	4,230	*a*258,775
1924–25 ..	6,638	63,764	8,798	166,432	11,606	3,010	260,248
1925–26 ..	6,614	103.395	7,001	239.337	13.306	5,223	374.876
1926–27 ..	5,626	88,896	399	256.528	13,826	5,665	*b*370,943
YIELD.							
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1922–23 ..	55,520	2,442.041	93.693	3,697.849	107,804	152,028	6,548.935
1923–24 ..	71,700	1,455,435	3,808	3,251.885	97,779	94,634	*a*4,975,451
1924–25 ..	118,300	1,444,823	171,124	3,103.718	177,537	50.729	5,066,231
1925–26 ..	105.150	1,774,963	92,441	4,134,824	158,300	90,619	6,356.297
1926–27 ..	100,221	1,920,722	1,991	4,630,044	128,136	149,800	*b*6,930,953

(*a*) Including Federal Capital Territory, 7 acres, 210 bushels.
(*b*) Including Federal Capital Territory, 3 acres, 39 bushels.

The States in which the annual production of barley averaged over 1,000,000 bushels for the past decade were South Australia and Victoria, the yields being respectively 3,256,049 and 1,939,793 bushels, the higher return per acre in the latter State tending to diminish the advantage held by South Australia in regard to acreage.

(ii) *Malting and other Barley.* (*a*) *Year 1926–27.* In recent years the statistics of all the States have distinguished between "malting" and "other" barley. Particulars for the season 1926–27 are as follows :—

BARLEY, MALTING AND OTHER.—AREA AND YIELD, 1926–27.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Malting barley ..	4,071	59,935	250	242,527	9.076	4,987	320,846
Other barley ..	1,555	28,961	149	14,001	4,750	678	*a*50,097
Total ..	5,626	88,896	399	256,528	13,826	5,665	*a*370,943
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
Malting barley ..	72.540	1,186,733	1,061	4,400,639	78,771	132,400	5,872,144
Other barley ..	27.681	733,989	930	229.405	49,365	17,400	*a*1,058,809
Total ..	100,221	1,920,722	1,991	4,630,044	128,136	149,800	*a*6,930,953

(*a*) Including Federal Capital Territory, 3 acres, 39 bushels.

The cultivation of malting barley is a special industry to cater for the demands of the brewing trade. Its expansion, however, appears to be restricted, although of late years the exports have increased. Taking Australia as a whole, more than 86 per cent. of the area under barley in 1926–27 was sown with the malting variety. The proportion varies largely in the several States.

(*b*) *Progress of Cultivation.* The following table sets out the acreage and yield of malting and other barley in Australia as a whole during the past five seasons :—

BARLEY, MALTING AND OTHER.—AREA AND YIELD, AUSTRALIA, 1922–23 TO 1926–27.

Season.	Acres.			Bushels.			Average Yields per Acre.		
	Malting.	Other.	Total.	Malting.	Other.	Total.	Malting.	Other.	Total.
1922–23 ..	279,159	63,037	342,196	5,283,144	1,265,791	6,548,935	18.93	20.08	19.14
1923–24 ..	217,613	41,162	258,775	4,196,008	779,443	4,975,451	19.28	18.94	19.23
1924–25 ..	211,761	48,487	260,248	4,163,896	902,335	5,066,231	19.66	18.61	19.47
1925–26 ..	319,441	55,435	374,876	5,401,489	954,808	6,356,297	16.91	17.22	16.96
1926–27 ..	320,846	50,097	370,943	5,872,144	1,058,809	6,930,953	18.30	21.13	18.68
Average 10 seasons 1917–27	233,811	62,963	296,774	4,397,048	1,219,695	5,616,743	18.80	19.37	18.93

During the past ten seasons the area and production of malting barley have represented more than three times the corresponding figures for other barley. The average yield per acre differs very little in respect of the two classes, the results for the past ten-yearly period being slightly in favour of the Cape variety.

(iii) *Average Yield.* The average yield of barley per acre varies considerably in the different States, being as a rule highest in Victoria and Tasmania, and lowest in Western Australia. Details for each State during the past five seasons, and for the decennium 1917–27, are given in the following table :—

BARLEY.—YIELD PER ACRE, 1922–23 TO 1926–27.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1922–23	14.24	23.76	17.70	17.18	11.66	26.64	19.14
1923–24	16.48	25.73	5.73	17.65	11.27	22.37	19.23
1924–25	17.82	22.66	19.45	18.65	15.30	16.85	19.47
1925–26	15.90	17.17	13.20	17.28	11.89	17.35	16.96
1926–27	17.81	21.61	4.99	18.05	9.27	26.44	18.68
Average for 10 seasons 1917–27	15.24	22.04	17.25	17.90	11.29	21.99	18.93

(iv) *Relation to Population.* During the last five seasons the quantity of barley produced in Australia has averaged 1 bushel per head of population. For the season 1926–27 the production ranged from 8 bushels per head in South Australia to less than 1 lb. per head in Queensland. Details for the years 1922–23 to 1926–27 are as follows :—

BARLEY.—PRODUCTION PER 1,000 OF POPULATION, 1922–23 TO 1926–27.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1922–23	26	1,536	119	7,206	314	694	1,163
1923–24	32	895	5	6,197	276	432	865
1924–25	52	872	205	5,764	488	233	863
1925–26	46	1,054	107	7,496	425	418	1,061
1926–27	43	1,122	2	8,175	338	698	1,134

2. Comparison with Other Countries.—(i) *Total Yield.* In comparison with the barley production of other countries, that of Australia appears extremely small. Particulars for some of the leading countries during recent years are as follows, the Australian figure being added for the purpose of comparison :—

BARLEY.—PRODUCTION IN VARIOUS COUNTRIES, 1922 TO 1926.

Country.	Yield in Bushels (000 omitted).		Country.	Yield in Bushels (000 omitted).	
	Average, 1922–1924.	1926.		Average, 1922–1924.	1926.
United States of America	183,091	183,531	Jugo-Slavia	12,182	16,583
Soviet Republics	167,785	249,757	Egypt	10,896	9,693
India	137,118	115,763	Bulgaria	9,904	11,490
Germany	93,604	108,579	Lithuania	8,960	10,973
Spain	87,391	92,434	Italy	8,780	10,582
Canada	76,053	95,695	Argentine Republic	8,539	17,637
Japan	75,390	84,553	Greece	(*a*)6,817	7,810
Poland	61,147	68,546	Austria	6,612	8,711
Rumania	59,730	74,293	Latvia	6,473	8,315
United Kingdom	49,049	45,989	Irish Free State	5,982	6,424
Czecho-Slovakia	46,694	50,400	**Australia**	**5,530**	**6,931**
France	42,875	44,021	Estonia	5,218	5,797
French Morocco	37,081	30,164	Tunis	5,071	8,466
Korea	32,219	36,775	Syria	4,920	10,164
Denmark	31,063	32,079	Finland	4,611	6,883
Algeria	27,337	22,080	Chile	4,331	4,994
Hungary	20,115	24,488	Norway	3,986	4,920
Sweden	12,453	14,274	Belgium	3,630	4,033
			Netherlands	3,010	3,416

(*a*) Average, years 1922–1923.

(ii) *Yield per Acre.* The following table shows the average yield of barley per acre in various countries of the world, the return ranging from 49.15 bushels in Netherlands to 8.89 bushels in Syria :—

BARLEY.—AVERAGE YIELD PER ACRE IN VARIOUS COUNTRIES, 1922 TO 1926.

Country.	Yield in Bushels per acre.		Country.	Yield in Bushels per acre.	
	Average, 1922–1924.	1926.		Average, 1922–1924.	1926.
Netherlands	49.15	50.72	**Australia**	**19.26**	**18.68**
Belgium	44.82	46.38	India	18.75	17.51
Denmark	44.35	41.64	Bulgaria	18.53	21.01
Irish Free State	37.18	45.56	Hungary	18.27	23.31
Chile	36.01	36.16	Austria	18.07	24.04
New Zealand	33.16	(*c*)36.47	Greece	(*a*)17.05	14.16
United Kingdom	32.67	36.17	Finland	16.76	25.30
Norway	30.43	34.37	Estonia	16.47	19.33
Sweden	29.93	32.26	Latvia	15.36	17.68
Germany	29.14	29.58	Korea	15.04	16.83
Egypt	28.49	29.12	Italy	14.48	18.04
Japan	28.17	34.79	Jugo-Slavia	13.38	19.12
Czecho-Slovakia	27.79	28.78	Argentine Republic	13.36	21.75
Canada	25.95	26.31	Rumania	13.29	19.38
France	24.92	25.80	French Morocco	13.13	9.56
United States of America	24.54	22.38	Union of South Africa	(*a*)10.90	(*b*)11.87
Spain	21.91	20.67	Soviet Republics	(*b*)9.89	13.82
Poland	20.85	22.49	Algeria	9.25	6.23
Lithuania	20.16	20.64	Syria	(*b*)8.89	16.92

(*a*) Average, years 1922–1923. (*b*) Year 1924. (*c*) Year 1925.

3. **World's Production.**—The area under barley in 1926 exceeded that of the previous year. There was an increase of 7 per cent. over the pre-war period for all countries for which figures are available, with the exception of the Soviet Republics, in which important barley-growing centre the area is still 30 per cent. below the average for the years 1909 to 1913. Weather conditions were not so favourable in certain of the producing areas, and the total yield was 87 million bushels less than that of the previous year, despite an increase in area sown of more than 1½ million acres. The production of barley in millions of bushels from 1909 onwards was as follows :—

Year.	Production.
Average, 1909–1913	1,676 millions of bushels.
1923	1,490 ,,
1924	1,342 ,,
1925	1,639 ,,
1926	1,552 ,,

4. **Price of Barley.**—The average price of barley in the Melbourne market during each of the past five years is given in the following table :—

BARLEY.—AVERAGE MELBOURNE PRICE PER BUSHEL, 1922 TO 1926.

Particulars.	1922.	1923.	1924.	1925.	1926.
	s. d.	*s. d.*	*s. d.*	*s. d.*	*s. d.*
Malting barley	4 1½	4 0¾	5 8	4 11	4 3
Cape barley	3 0	3 1½	4 7¾	..	3 11

5. **Imports and Exports.**—The Australian export trade in barley has increased in recent years, the average annual shipments during the last five years amounting to 1,657,000 bushels, as compared with an average of 1,336,000 bushels for the previous quinquennium. The grain was consigned mainly to the United Kingdom and Belgium, South Australia being the principal exporting State. Particulars of the Australian overseas imports and exports for the years 1922–23 to 1926–27 are contained in the following table :—

BARLEY.—IMPORTS AND EXPORTS, AUSTRALIA, 1922–23 TO 1926–27.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Bushels.	£	Bushels.	£	Bushels.	£
1922–23	34	18	2,213,184	432,326	2,213,150	432,308
1923–24	4	3	1,828,788	318,912	1,828,784	318,909
1924–25	67,242	16,926	1,490,416	420,432	1,423,174	403,506
1925–26	32	14	729,528	142,948	729,496	142,934
1926–27	696	285	2,021,480	383,103	2,020,784	382,818

In some years there is an export of Australian pearl and Scotch barley, the total for 1926–27 reaching 39,358 lb., valued at £345. The trade for the year was mainly with New Zealand and Hong Kong.

6. **Imports and Exports of Malt.**—In pre-war times the imports of malt into Australia were fairly extensive, the supply being obtained principally from the United Kingdom. Since the outbreak of the war in 1914, however, imports have practically ceased.

and in 1917–18 and 1920–21 fairly large quantities were exported to South Africa and Japan. Details of imports and exports for the years 1922–23 to 1926–27 are given hereunder :—

MALT.—IMPORTS AND EXPORTS, AUSTRALIA, 1922–23 TO 1926–27.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Bushels.	£	Bushels.	£	Bushels.	£
1922–23	28	63	4,618	2,006	4,590	1,943
1923–24	28	13	3,573	1,550	3,545	1,537
1924–25	43	29	3,228	1,698	3,185	1,669
1925–26	325	182	1,830	971	1,505	789
1926–27	688	197	2,285	1,340	1,597	1,143

7. **Value of Barley Crop.**—The estimated values of the barley crop of Australia for the seasons 1922–23 to 1926–27 were £1,220,703, £879,811, £1,363,656, £1,305,328 and £1,291,470 respectively. The extent to which the several States have contributed to the total in 1926–27 is shown in the following table :—

BARLEY.—VALUE OF CROP (*a*), 1926–27.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
Total value ..	£22,990	£378,742	£473	£830,115	£24,200	£34,940	£10	£1,291,470
Value per acre	£4/1/9	£4/5/2	£1/3/9	£3/4/8	£1/15/0	£6/3/4	£3/6/8	£3/9/8

(*a*) Exclusive of the value of straw.

§ 8. Rice.

The success attending the efforts of rice growers on the Murrumbidgee Irrigation Area has proved that rice can be grown profitably on the settlement. Experimental rice cultivation has been carried on at the Yanco Experimental Farm for some years, but it was not until 1924–25 that an attempt was made to grow the cereal on a commercial basis. In that year 153 acres were cropped for a yield of 16,240 bushels. Consignments of "paddy" rice were forwarded to Sydney and Melbourne for the necessary treatment before marketing, and the results showed that the quality was much superior to the imported article. In 1925–26 1,556 acres were reaped for 61,098 bushels, or an average yield of 39.27 bushels per acre. In 1926–27 the area was increased to 3,958 acres, from which 214,740 bushels were reaped for an average of 54.25 bushels per acre. Final figures for the 1927–28 crop are not yet available, but it is estimated that 12,000 acres were harvested for 960,000 bushels. This production represents about 18,000 tons and is sufficient to meet local requirements, which during the past five years, averaged approximately 17,000 tons per annum. According to the Irrigation Commission there are about 53,000 acres of land on the settlement suitable for rice-growing, and it is estimated that at least 40,000 acres could be so used, of which probably 20,000 acres would be under fallow each year and 20,000 under crops. Over-production should not prevent undue difficulties as there is a ready market in the East, as well as in England and Germany. United States of America first grew rice commercially in 1912, and having met her own requirements is now exporting to European Countries and to Japan. The Commonwealth Government has protected the new industry by the imposition of a Customs duty of 3s. 4d. per cental on uncleaned rice and 6s. per cental on other than uncleaned.

§ 9. Other Grain and Pulse Crops.

In addition to the grain crops already specified, the only other grain and pulse crops extensively grown in Australia are beans, peas, and rye. The total area under the two former crops for the season 1926–27 was 48,943 acres, giving a yield of 843,797 bushels, or an average of 17.24 bushels per acre, being above the average yield for the decennium ended 1926–27, which was 16.26 bushels per acre. The States in which the greatest area is devoted to beans and peas are Tasmania, South Australia and Victoria. The total area under rye in Australia during the season 1926–27 was 2,908 acres, yielding 38,399 bushels, giving an average of 13.21 bushels per acre. This was higher than the average for the past ten seasons, which was 11.66 bushels per acre. Over 39 per cent. of the rye grown during the season was produced in New South Wales, and 27 per cent. in Victoria.

§ 10. Potatoes.

1. Progress of Cultivation.—(i) *Area and Yield.* The principal potato-growing State is Victoria, which possesses peculiar advantages for the growth of this tuber. The rainfall is generally satisfactory, while the atmosphere is sufficiently dry to be unfavourable to the spread of Irish blight, consequently potatoes are grown in nearly every district except in the wheat belt Tasmania comes next in order of importance, followed by New South Wales.

The area and production of potatoes in each State during the last five years are given hereunder :—

POTATOES.—AREA AND YIELD, 1922–23 TO 1926–27.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
AREA.								
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1922–23 ..	22,556	61,741	7,649	5,749	3,621	34,407	12	135,735
1923–24 ..	21,850	59,306	6,127	5,239	4,761	37,040	29	134,352
1924–25 ..	23,384	61,295	9,493	3,292	5,122	36,171	19	138,776
1925–26 ..	22,723	63,369	10,478	2,895	4.262	33,190	8	136,925
1926–27 ..	21,906	66,185	8,642	3,549	5,144	33,984	35	139,445
YIELD.								
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1922–23 ..	35,694	148,354	10,517	17,356	15,198	101,201	32	328,352
1923–24 ..	60,949	238 520	8,878	21,327	17,830	99,936	130	447,570
1924–25 ..	57,179	139,043	20,314	12,226	19,891	83,377	95	332,125
1925–26 ..	43,081	160,729	15,386	10,764	16,052	67,341	56	313,409
1926–27 ..	53,223	162,909	9,749	15,375	17,755	114,100	65	373,176

The cultivation of potatoes in Australia has declined by 7,070 acres during the past decennium, due mainly to a decrease in New South Wales of 9,380 acres. In Victoria and Tasmania—the chief potato-growing areas—increases of 1,777 and 3,033 acres respectively were recorded. The average yield during the last ten years was 345,779 tons, compared with 374,680 tons during the previous decade. The record production of 507,153 tons was obtained in 1906–7.

(ii) *Average Yield.* The suitability of the soil, climate, and general conditions for potato growing is evidenced by the satisfactory yields per acre which are generally obtained in Australia despite the little attention paid to this crop, the average yield during the past ten seasons being 2.59 tons per acre. The lowest yield is that obtained in Queensland with an average of 1.72 tons for the same period.

Particulars for each State for the seasons 1922–23 to 1926–27, and for the past decennium, are given hereunder :—

POTATOES.—YIELD PER ACRE, 1922–23 TO 1926–27.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1922–23	1.58	2.40	1.37	3.02	4.20	2.94	2.67	2.42
1923–24	2.79	4.02	1.45	4.07	3.74	2.70	4.48	3.33
1924–25	2.45	2.27	2.14	3.71	3.88	2.31	5.00	2.39
1925–26	1.90	2.54	1.47	3.72	3.77	2.03	7.00	2.29
1926–27	2.43	2.46	1.13	4.33	3.45	3.36	1.86	2.68
Averages for 10 seasons 1917–27	2.15	2.72	1.72	3.51	3.51	2.64	3.40	2.59

Concurrently with the decrease in acreage a falling off has occurred in the average yield per acre during the past decennium. This decline was in evidence throughout the principal States, and for Australia as a whole, averaged 1½ cwt. per acre. In Tasmania, where the decrease was greatest, the average yield diminished by 5 cwt. during the past decade. The comparatively low yield per acre is due to the neglect of rotation, and the insufficient use of manures. Rotation and manuring are carefully studied in many European countries, with the result that the production per acre is double that obtained in Australia.

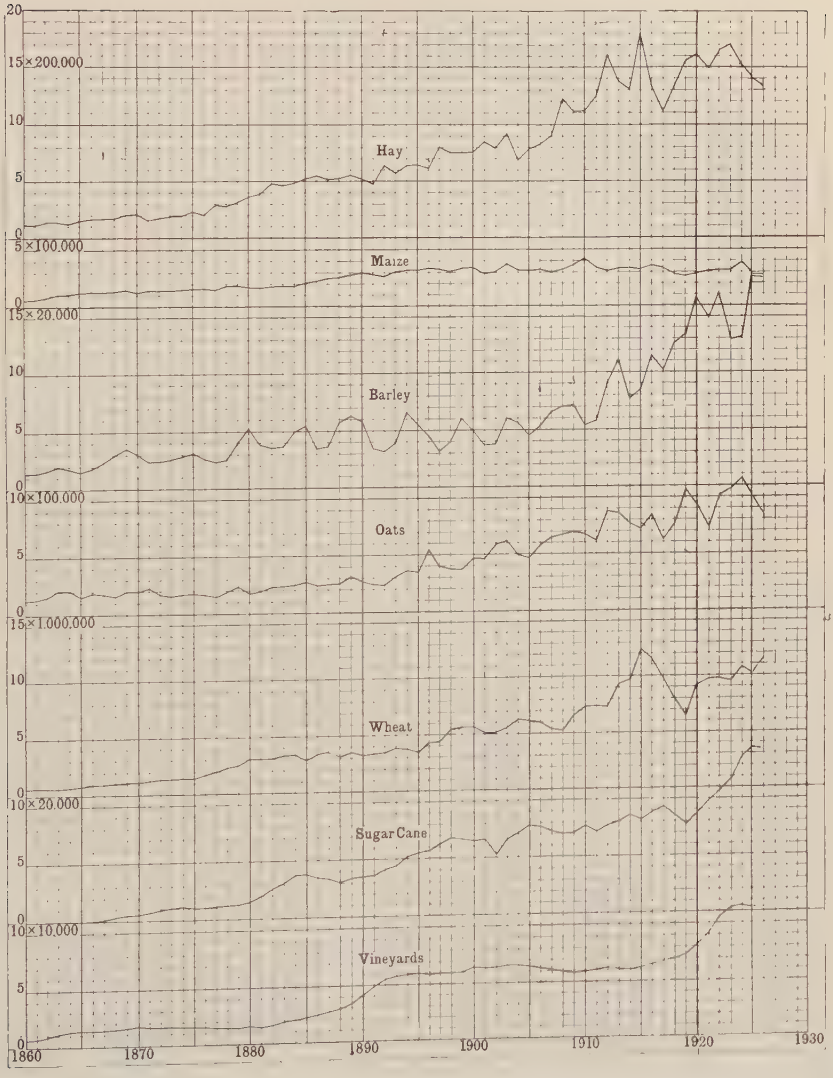
(iii) *Relation to Population.* The average annual production of potatoes per head of the population of Australia for the past five seasons was approximately 137 lb. In Tasmania, where this crop is of far greater importance in relation to population than is the case in any other State, the production per head in 1906–7 was nearly a ton, while for the past five seasons it has averaged about 8½ cwts. Details for the seasons 1922–23 to 1926–27 are as follows :—

POTATOES.—PRODUCTION PER 1,000 OF POPULATION, 1922–23 TO 1926-27.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1922–23 ..	16	93	13	34	44	462	13	58
1923–24 ..	28	147	11	41	50	456	50	78
1924–25 ..	25	84	24	23	55	383	32	57
1925–26 ..	19	95	18	20	43	310	14	52
1926–27 ..	23	95	11	27	47	531	13	61

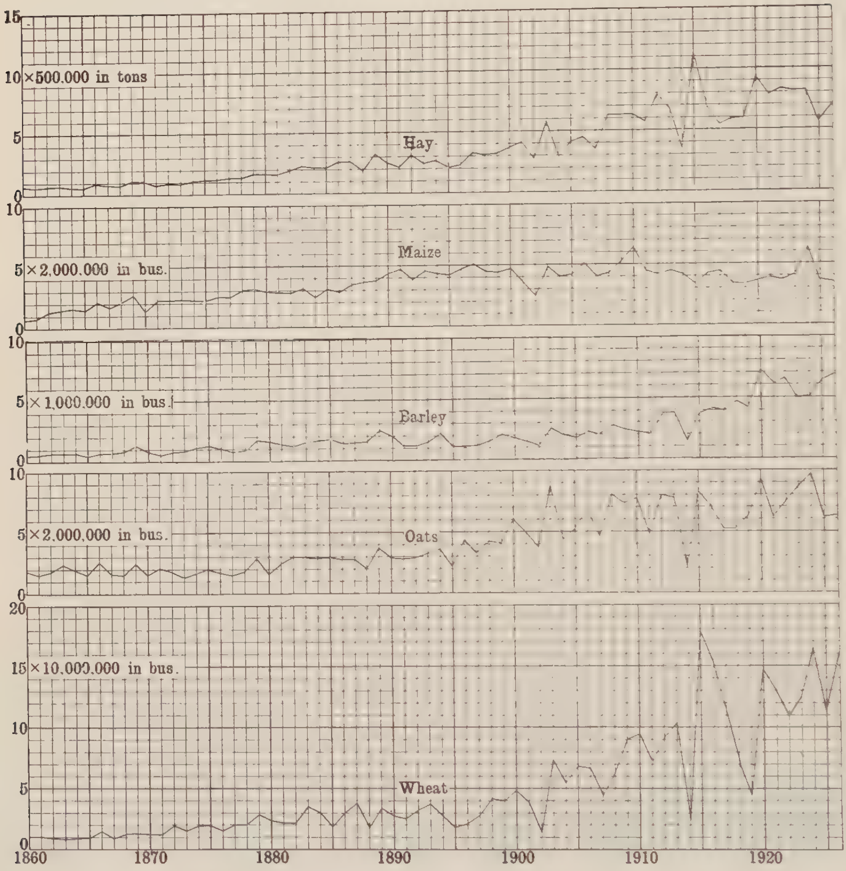
2. **Imports and Exports.**—Under normal conditions there is a moderate export trade in potatoes carried on by Australia principally with the Pacific Islands and Papua. On the other hand, when the recurrence of droughts causes a shortage in any of the

AREA UNDER PRINCIPAL CROPS—AUSTRALIA, 1860 TO 1926-27.

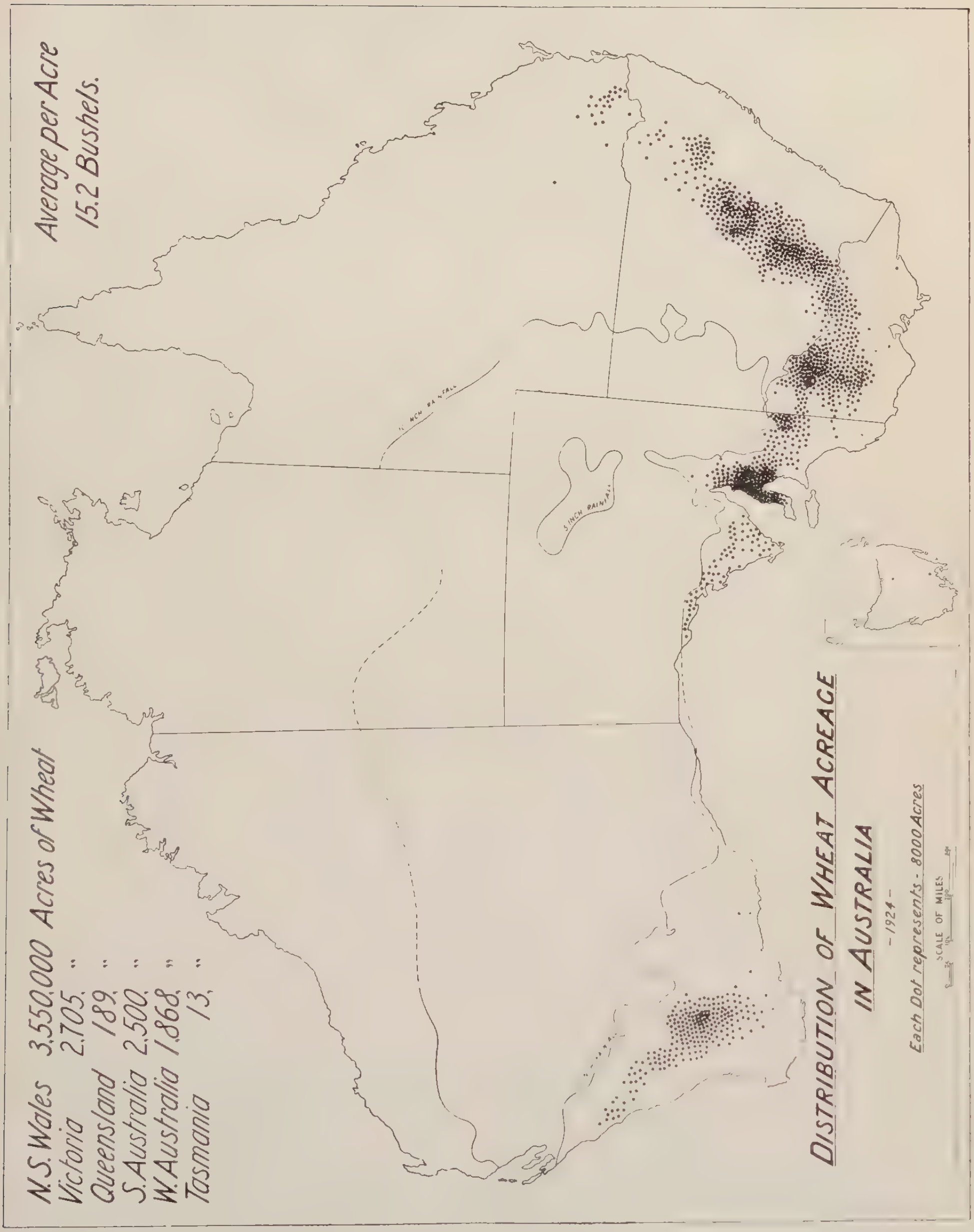


EXPLANATION.—The base of each small square represents an interval of one year, while the vertical height represents a number of acres, varying with the nature of the crop in accordance with the scale given on the left of the graph. The height of each curve above its base line denotes, for the crop to which it relates, the total area under cultivation in Australia during the successive seasons.

PRODUCTION OF PRINCIPAL CROPS—AUSTRALIA 1860 TO 1926-27



EXPLANATION.—A separate base line is provided for each of the crops dealt with. In each instance the base of a small square represents an interval of one year, the vertical height of such square representing in the case of wheat, 10,000,000 bushels; oats, 2,000,000 bushels; barley, 1,000,000 bushels; maize, 2,000,000 bushels; and hay, 500.000 tons. The height of each curve above its base line denotes the aggregate yield in Australia of the particular crop during the successive seasons.


N.S.Wales 3,550,000 Acres of Wheat
Victoria 2,705, "
Queensland 189, "
S.Australia 2,500, "
W.Australia 1,868, "
Tasmania 13, "
Average per Acre
15.2 Bushels.
10 INCH RAINFALL
5 INCH RAINFALL
DISTRIBUTION OF WHEAT ACREAGE
IN AUSTRALIA
-1924-
Each Dot represents - 8000 Acres
SCALE OF MILES

States, importations are usually made from New Zealand. The quantities and values of the Australian oversea imports and exports of potatoes during the past five years are shown in the following table :—

POTATOES.—IMPORTS AND EXPORTS, AUSTRALIA, 1922–23 TO 1926–27.

Year.	Imports.		Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons.	£	Tons.	£	Tons.	£
1922–23	72	957	2,061	23,599	1,989	22,642
1923–24	38	639	3,951	29,974	3,913	29,335
1924–25	71	877	5,832	30,283	5,761	29,406
1925–26	8,168	77,056	1,017	16,674	– 7,151	– 60,382
1926–27	14,491	125,188	1,158	14,950	– 13,333	– 110,238

Note—The minus sign (–) signifies net imports.

3. Value of Potato Crop.—The estimated value of the potato crop of each State for the season 1926–27 is given in the following table, together with value per acre :—

POTATOES.—VALUE OF CROP, 1926–27.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	£	£	£	£	£	£	£	£
Total value ..	433,770	1,221,817	169,246	144,313	291,163	855,160	530	3,115,999
Value per acre	£19/16/0	£18/9/3	£19/11/8	£40/13/3	£56/12/1	£25/3/3	£15/2/10	£22/6/11

§ 11. Other Root and Tuber Crops.

1. Nature and Extent.—Root crops, other than potatoes, are not extensively grown in Australia, the total area devoted to them for the season 1926–27 being only 22,911 acres. The principal of these crops are onions, mangolds, sugar beet, turnips, and "sweet potatoes." Of these, onions, sugar beet and mangolds are most largely grown in Victoria, turnips in Tasmania, and sweet potatoes in Queensland. The total area under onions in Australia during the season 1926–27 was 10,057 acres, giving a yield of 50,361 tons, and averaging 5.01 tons per acre. The area devoted in 1926–27 to root crops other than potatoes and onions, viz., 12,854 acres, yielded 72,204 tons, and gave an average of 5.62 tons per acre. The areas and yields here given are exclusive of the production of "market gardens," reference to which is made further on.

2. Imports and Exports.—The only root crop, other than potatoes, in which any considerable oversea trade is carried on by Australia is that of onions. During the past five years 7,332 tons, valued at £95,830, were imported, principally from Japan, the United States of America and New Zealand, while during the same period, the exports totalled 21,508 tons, valued at £199,432, and were shipped mainly to New Zealand, the Pacific Islands, the Philippine Islands, and Canada.

§ 12. Hay.

1. **Nature and Extent.**—(i) *Area and Yield.* As already stated, the chief crop in Australia is wheat grown for grain. Next in importance is hay, which for the season 1926–27 averaged over 15 per cent. of the total area cropped. In most European countries the hay consists almost entirely of meadow and other grasses, but in Australia a very large proportion is composed of wheat and oats. Large quantities of lucerne hay are also made, particularly in New South Wales and Queensland. The area under hay of all kinds in the several States during the last five years is given hereunder. The progress from 1860 onwards may be traced from the graph accompanying this chapter.

HAY.—AREA AND YIELD, 1922-23 TO 1926-27.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	N. Ter	Fed. Cap. Ter.	Australia.
					AREA.				
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1922–23	888,250	1,261,408	78,050	577,810	431,633	100,088	10	1,207	3,338,456
1923–24	1,022,118	1,277,606	46,909	631,267	329,534	97,183	10	1,599	3,406,226
1924–25	762,242	1,120,312	95,007	562,253	397,591	87,945	10	1,045	3,026,405
1925–26	749,192	1,013,613	66,828	517,220	391,142	92,595	..	1,413	2,832,003
1926–27	623,424	1,080,993	40,141	496,105	358,487	98,289	..	2,192	2,699,631
					YIELD.				
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1922–23	1,059,529	1,665,089	101,069	697,189	457,371	167,282	10	1,450	4,148,989
1923–24	1,170,737	1,541,287	43,407	781,768	368,122	144,298	5	2,310	4,051,934
1924–25	1,151,238	1,492,588	136,804	716,749	448,525	121,110	30	1,375	4,068,419
1925–26	564,006	929,068	99,742	612,671	355,269	114,920	..	2,269	2,677,945
1926–27	875,227	1,387,971	47,740	598,835	423,839	151,200	..	2,540	3,487,352

In all the States marked fluctuations occur yearly in the area under hay. These fluctuations are due to various causes, the principal being the variations in the relative prices of grain and hay, and the favourableness or otherwise of the season for a grain crop. Thus, crops originally sown for grain are frequently cut for hay owing to the improved price of that commodity, or owing to the fact that the outlook for grain is not satisfactory. On the other hand, improved grain prices or the prospect of a heavy yield will frequently cause crops originally intended for hay to be left for grain. The area under hay in Australia during the season 1915–16, *i.e.*, 3,597,771 acres, was the highest on record, whilst the average during the past decennium amounted to 2,956,190 acres.

(ii) *Average Yield.* The States in which the highest average yields per acre have been obtained during the last decennium are Tasmania, Queensland and Victoria, in the two former of which States also the smallest areas are devoted to this crop. For the same period the lowest yield for Australia as a whole was that of 19 cwt. per acre in 1919–20; while the highest was that of 29 cwt. in 1920–21, followed closely by 27 cwt.

obtained in 1924–25. The average for the decennium was 24¼ cwt. Particulars for the several States for the seasons 1922–23 to 1926–27, and the average for the last ten years, are given hereunder :—

HAY.—YIELD PER ACRE, 1922–23 TO 1926–27.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Fed. Cap. Ter.	Australia.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1922–23	1.19	1.32	1.29	1.21	1.06	1.67	1.00	1.20	1.24
1923–24	1.15	1.21	0.93	1.24	1.12	1.48	0.50	1.44	1.19
1924–25	1.51	1.33	1.44	1.27	1.13	1.38	3.00	1.32	1.34
1925–26	0.75	0.92	1.49	1.18	0.91	1.24	..	1.60	1.05
1926–27	1.40	1.28	1.19	1.21	1.18	1.54	..	1.16	1.29
Average for 10 seasons 1917–1927 ..	1.16	1.25	1.35	1.20	1.07	1.43	3.23	1.42	1.21

(iii) *Relation to Population.* During the past five seasons the Australian hay production per head of population has varied between 10 cwt. in 1925–26 and 14¾ cwt. in 1922–23, averaging about 12⅓ cwt. per head for the period. Hay production per head of population is generally highest in South Australia. Details for the seasons 1922–23 to 1926–27 are given hereunder :—

HAY.—YIELD PER 1,000 OF POPULATION, 1922–23 TO 1926–27.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Fed. Cap. Ter.	Australia.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1922–23 ..	488	1,047	128	1,359	1,331	764	3	567	737
1923–24 ..	530	948	54	1,490	1,040	659	1	881	705
1924–25 ..	511	901	163	1,331	1,231	556	8	459	693
1925–26 ..	245	552	116	1,111	955	530	..	576	497
1926–27 ..	373	811	54	1,057	1,119	714	..	516	571

(iv) *Varieties Grown.* Particulars concerning the kinds of crop cut for hay are furnished in the returns prepared by five of the States. In the case of Tasmania the bulk consists of oaten hay ; full particulars, however, are not available for that State.

Details for the past five seasons are given in the following table :—

HAY.—VARIETIES GROWN, 1922–23 TO 1926–27.

Varieties.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
NEW SOUTH WALES—	Acres.	Acres.	Acres.	Acres.	Acres.
Wheaten	597,959	695,369	388,422	449,653	311,073
Oaten	216,136	241,161	274,408	209,047	216,403
Barley	1,265	1,584	1,150	781	692
Lucerne	72,337	83,256	97,994	89,368	95,003
Other	553	748	268	343	253
Total	888,250	1,022,118	762,242	749,192	623,424

HAY.—VARIETIES GROWN, 1922–23 TO 1926–27—*continued.*

Varieties.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	Acres.	Acres.	Acres.	Acres.	Acres.
VICTORIA—					
Wheaten	213,219	163,826	87,312	230,364	101,243
Oaten	1,021,216	1,084,136	1,000,382	759,209	959,019
Lucerne, etc.	26,973	29,644	32,618	24,040	20,731
Total ..	1,261,408	1,277,606	1,120,312	1,013,613	1,080,993
QUEENSLAND—					
Wheaten	8,834	8,714	9,457	10,514	2,798
Oaten	4,542	1,344	8,304	2,214	790
Lucerne	60,042	33,505	61,089	50,526	33,263
Other..	4,632	3,346	16,157	3,574	3,290
Total ..	78,050	46,909	95,007	66,828	40,141
SOUTH AUSTRALIA—					
Wheaten	359,834	381,962	304,183	273,300	230.120
Oaten	208,769	234,899	246,825	234,923	256.417
Lucerne	4,973	7,270	8,344	6,218	5,613
Other..	4,234	7,136	2,901	2,779	3,955
Total ..	577,810	631,267	562,253	517,220	496,105
WESTERN AUSTRALIA—					
Wheaten	307,142	223,770	242,216	238,110	207.841
Oaten	123,232	103,723	153,315	150,534	148,150
Lucerne	142	175	339	368	340
Other..	1,117	1,866	1,721	2,130	2,156
Total ..	431,633	329,534	397,591	391,142	358,487

Wheaten hay is the principal hay crop in New South Wales, South Australia, and Western Australia, oaten hay in Victoria and Tasmania, and lucerne in Queensland.

2. Comparison with Other Countries.—As already noted, the hay crops of most European countries consist of grasses of various kinds, amongst which clover, lucerne, sainfoin and rye grass occupy prominent places. The statistics of hay production in these countries are not prepared on a uniform basis, consequently any attempt to furnish extensive comparisons would be misleading. It may be noted, however, that in Great Britain the production of hay from clover, sainfoin, etc., for the year 1927 amounted to 2,755,000 tons from 1,986.000 acres, while from permanent grasses a yield of 4,424,000 tons of hay was obtained from 4,485.000 acres, giving a total of 7,179,000 tons from 6,471,000 acres, or about 22 cwt. per acre.

3. Imports and Exports.—Under normal conditions hay, whether whole or in the form of chaff, is somewhat bulky for oversea trade, and consequently does not in such circumstances figure largely amongst the imports and exports of Australia. During 1926–27, 280 tons were imported, while the exports amounted to 8,041 tons, valued at £53,331, the principal purchases being made by New Zealand, India, the Philippine Islands, Malaya (British), Ceylon, and Hong Kong.

4. Value of Hay Crop.—The following table shows the value and the value per acre of the hay crop of the several States for the season 1926–27 :—

HAY.—VALUE OF CROP, 1926–27.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	£	£	£	£	£	£	£	£
Total Value ..	6,528,550	6,245,869	422,689	2,095,954	1,259,477	680,200	19,620	17,252,359
Value per acre ..	£10/9/5	£5/15/7	£10/10/7	£4/4/6	£3/10/3	£6/18/4	£8/19/0	£6/7/10

§ 13. Green Forage.

1. Nature and Extent.—(i) *Area.* In all the States a considerable area is devoted to the production of green forage, mainly in connexion with the dairying industry. The total area so cropped is considerably swollen in adverse seasons by the inclusion of wheat or other cereal crops deemed unsuitable for the production of either grain or hay. Under normal conditions the principal crops cut for green forage are maize, sorghum, oats, barley, rye, rape, and lucerne, while small quantities of sugar-cane also are so used. Particulars concerning the area under green forage in the several States during each of the last five years are given in the following table :—

GREEN FORAGE.—AREA, 1922–23 TO 1926–27.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1922–23	499,679	102,451	188,636	61,000	32,997	9,073	..	35	893,871
1923–24	429,765	107,371	306,693	55,282	51,754	10,389	50	7	961,311
1924–25	166,030	99.531	134,109	73,023	78,586	13,602	..	43	564,924
1925–26	479,434	107,873	247,482	102,732	100,558	17,101	..	30	1,055,210
1926–27	217,385	87,241	342,580	105,170	109,314	19,213	..	54	880,957

(ii) *Relation to Population.* Particulars of the area under green forage per 1,000 of the population for the seasons 1922–23 to 1926–27 are given hereunder :—

GREEN FORAGE.—AREA PER 1,000 OF POPULATION, 1922–23 TO 1926–27.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1922–23 ..	230	64	239	119	96	41	..	14	159
1923–24 ..	195	66	378	105	146	47	14	3	167
1924–25 ..	74	60	161	136	216	62	..	14	96
1925–26 ..	209	64	287	186	270	79	..	8	176
1926–27 ..	93	51	388	186	289	89	..	11	144

2. Value of Green Forage Crops.—The value of these crops is variously estimated in the several States, and the Australian total for the season 1926–27 may be taken approximately as £3,912,455 or about £4 8s. 10d. per acre.

§ 14. Sugar-cane and Sugar-beet.

1. Sugar-cane.—(i) *Area.* Sugar-cane for sugar-making purposes is grown only in Queensland and New South Wales, and much more extensively in the former than in the latter. Thus, of a total area of 284,828 acres under sugar-cane in Australia for the season 1926–27, there were 266,519 acres, or about 93½ per cent., in Queensland. Sugar-cane growing appears to have been started in Australia in or about 1862, as the earliest statistical record of sugar-cane as a crop is that which credits Queensland with an area of 20 acres for the season 1862–63. In the following season the New South Wales returns show an area of 2 acres under this crop. The area under cane in New South Wales reached its maximum in 1895–96 with a total of 32,927 acres. Thenceforward with slight variations it gradually fell to 10,490 acres in 1918–19, but from that year onwards considerable improvement has taken place, and during the past five years more than 5,000 acres have been added to the cane-fields. In Queensland, although fluctuations in area are manifest, the general trend has been upwards, the acreage under cane for the season 1925–26 being the highest on record. The area under sugar-cane in Australia from 1922–23 is given in the following table, and particulars for earlier years may be seen from the accompanying graphs :—

SUGAR-CANE.—AREA, 1922–23 TO 1926–27.

Season.	New South Wales.		Queensland.		Australia.		
	Productive.	Unproductive.	Productive.	Unproductive.	Productive.	Unproductive.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1922–23 ..	5,879	8,704	140,850	61,453	146,729	70,157	216,886
1923–24 ..	6,733	10,582	138,742	81,223	145,475	91,805	237,280
1924–25 ..	7,761	12,232	167,649	85,870	175,410	98,102	273,512
1925–26 ..	8,688	10,675	189,675	79,834	198,363	90,509	288,872
1926–27 ..	10,128	8,181	189,312	77,207	199,440	85,388	284,828

(ii) *Productive and Unproductive Cane.* The areas given in the preceding table represent sugar-cane grown for purposes other than green forage. The whole area was not necessarily cut for crushing during any one season, there being always a considerable amount of young and " stand over " cane, as well as a small quantity required for plants. The season in which the highest acreage is recorded may not show the greatest area of productive cane cut for crushing, as was evidenced in 1923–24, when, although the total acreage was greater, the area cut was less than in the previous year.

(iii) *Yield of Cane and Sugar.* Queensland statistics of the production of sugar-cane are not available for dates prior to the season 1897–98. In that season the total for Australia was 1,073,883 tons, as against the maximum production of 3,965,587 tons in 1925–26. The average production of cane during the decennium ended 1926–27 was 2,493,259 tons. The three highest yields of sugar were in 1925–26, 1924–25 and 1926–27, the quantities being 517,970 tons, 427,327 tons, and 415,876 tons respectively. The decennial average was 314,738 tons of sugar. Particulars relative to the total yields of cane and sugar for the past five years are as follows :—

SUGAR-CANE.—YIELD OF CANE AND SUGAR, 1922–23 TO 1926–27.

Season.	New South Wales.		Queensland.		Australia.	
	Cane.	Sugar.	Cane.	Sugar.	Cane.	Sugar.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1922–23 ..	147,992	18,580	2,167,990	287,785	2,315,982	306,365
1923–24 ..	132,084	16,829	2,045,808	269,175	2,177,892	286,004
1924–25 ..	228,978	26,682	3,171,341	400,645	3,400,319	427,327
1925–26 ..	297,335	32,385	3,668,252	485,585	3,965,587	517,970
1926–27 ..	230,254	26,604	2,925,662	389,272	3,155,916	415,876

The production of raw sugar in Australia in 1926–27 amounted to 415,876 tons manufactured from 3,155,916 tons of cane. These figures represent considerable reductions on the previous year, due entirely to the abnormally dry season experienced. The assistance given by the Commonwealth and State Governments during recent years has greatly benefited the sugar industry. In 1920–21 the area cultivated in Queensland was 162,619 acres and the number of cane farmers was 3,930, whereas in 1926–27, 266,519 acres were under cultivation and the number of growers of 5 acres and over had risen to 6,608, or an increase of 2,678, in the six years.

Final figures for the 1927–28 season are not yet available, but the season was very favourable for the growth of the cane and it is estimated that 3,810,000 tons were cut. Owing to the substantial rains in the early part of the year, followed by a dry winter and spring, the commercial sugar content of the cane was remarkably good, and approximately 516,000 tons of sugar were crushed during the season.

Earlier in the year indications pointed to a record crop in 1928–29, but later advices report various climatic drawbacks, and it is now believed that the yield will be in the vicinity of that of the previous year.

(iv) *Average Yield of Cane and Sugar.* The average yield per acre of productive cane is much higher in New South Wales than in Queensland, the average during the last decade being 25.95 tons for the former and 17.30 for the latter State. For some years prior to 1910–11, the yield in New South Wales remained practically constant at about 21 tons per acre. Since that year, the average yield per acre has shown an upward tendency, reaching 30 tons or over during 1913–14, 1914–15, 1917–18, and 1925–26. The climatic conditions affecting the long coastal area where this industry is situated in Queensland are largely responsible for the great variations in the yields of sugar for that State, the figures ranging during the past decennium from 14.75 tons per acre in 1923–24 to 24.88 tons in 1917–18.

The greatest production of sugar per acre crushed during the past decennium occurred in 1917–18, when 2.87 tons were obtained, the respective crushings for New South Wales and Queensland averaging 3.56 and 2.83 tons. The average yield per acre for the past ten years was 3.03 tons in New South Wales, and 2.20 tons in Queensland.

(v) *Quality of Cane.* The quantity of cane required to produce a ton of sugar varies with the variety sown, the district where grown, also with the season, and for the decennium ended 1926–27 averaged 7.92 tons, the average production of sugar being 12.63 per cent. of the weight of cane crushed. As the result of the systematic study of cane culture in Queensland, the sugar contents of the cane have been considerably increased in recent years. During the ten years ended 1916–17 it required on the average 8.75 tons of cane to produce 1 ton of sugar, whereas the average figure for the past decennium was reduced to 7.88 tons.

SUGAR-CANE AND SUGAR.—YIELD PER ACRE, 1922–23 TO 1926–27.

Season.	New South Wales.			Queensland.			Australia.		
	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1922–23	25.17	3.16	7.97	15.39	2.04	7.53	15.78	2.09	7.56
1923–24	19.62	2.50	7.85	14.75	1.94	7.60	14.97	1.97	7.60
1924–25	29.50	3.44	8.58	18.92	2.44	7.75	19.38	2.48	7.80
1925–26	34.22	3.73	9.18	19.34	2.56	7.55	19.99	2.61	7.66
1926–27	22.73	2.63	8.65	15.45	2.06	7.52	15.82	2.09	7.59
Average 10 seasons 1917–27 ..	25.95	3.03	8.57	17.30	2.20	7.88	17.70	2.23	7.92

The Bureau of Sugar Experiment Stations established in Queensland is rendering splendid service to the sugar industry in that State, by advocating and demonstrating better methods of cultivation, the use of green manures, lime, and fertilizers, together with the introduction and distribution of improved varieties of sugar cane.

The Falkiner cane-harvester was again in the field during the year, and although the machine is promising, it requires further alterations and adjustments to enable it to operate successfully. A cane harvester of a lighter character, invented in the district, was tried at Mackay and revealed great possibilities. Further trials are awaited with interest. A third cane harvester manufactured in New South Wales was also tried at Bundaberg, but no details are available. Improvements in cultivating machinery, moreover, are continually being made, and the use of tractors is universal in the sugar districts of North Queensland.

(vi) *Relation to Population.* The yield of sugar in Australia during the five years 1922–23 to 1926–27 was more than sufficient to supply local requirements, the average production during the period amounting to 149 lbs. per head of population, while the consumption was estimated to average 118 lbs. per head. Details for the period 1922–23 to 1926–27 are as follows :—

SUGAR.—PRODUCTION PER HEAD OF POPULATION, 1922-23 TO 1926-27.

State.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	lbs.	lbs.	lbs.	lbs.	lbs.
New South Wales ..	19	17	27	32	25
Queensland	818	743	1,098	1,263	988
Australia	122	111	166	194	152

2. **Sugar-beet.**—(i) *Area and Yield.* The following table shows the acreage under sugar-beet, and the production in Victoria during the past five seasons :—

SUGAR-BEET.—AREA AND PRODUCTION IN VICTORIA, 1922–23 TO 1926–27.

Particulars.		1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
Area harvested ..	acres	2,045	1,937	1,897	1,880	2,024
Production ..	tons	20,444	29,512	24,468	21,194	9,851
Average per acre	,,	10.00	15.24	12.90	11.27	4.87
Sugar produced ..	,,	2,784	3,499	3,017	2,315	1,177

Owing to drought the 1926–27 season was the worst yet experienced, the crop being almost a failure. Growers received 40s. per ton for their beets. Conditions were much more favourable for the 1927–28 season and the area under beets was increased.

(ii) *Encouragement of Beet-growing.* During recent years an effort has been made to revive the sugar-beet industry in Victoria. The State Government has advanced its irrigation scheme on the Macalister River to provide water for the district for the 1927–28 season. A fine grade of white sugar is manufactured at Maffra, and considerable quantities of beet pulp and molasses are distributed for stock feed.

3. **Sugar Bounties.**—The provision of bounties or similar aids to the sugar growers of Australia early occupied the attention of the Commonwealth Parliament, the object in view being that of assisting the industry, and at the same time diminishing the employment of coloured labour in connexion therewith. An account of the various Acts in connexion with sugar bounties and sugar excise tariffs will be found on pages 394 to 396 of Year Book No. 6. In 1912 the Sugar Excise Repeal Act and the Sugar Bounty Abolition Act were passed by the Federal Parliament, conditionally on the Queensland Parliament approving of legislation prohibiting the employment of coloured labour in connexion with the industry. The State Sugar Cultivation Act, the Sugar Growers Act, and the Sugar Growers' Employees Act of 1913, having been approved of, the 1912 Federal Acts, which repeal all previous enactments in regard to excise on sugar and bounty on cane, came into force by proclamation in July, 1913.

4. **Sugar Purchase by Commonwealth Government.**—The steps taken by the Commonwealth Government in connexion with this matter were alluded to in previous issues of the Year Book. (See No. 18, p. 720.)

By agreement between the Commonwealth and Queensland Governments in 1925, it was arranged that the embargo on the importation of foreign sugar should be extended for three years from 1st September, 1925. The price payable for the raw sugar needed for home consumption was fixed at £27 per ton, less £1 per ton to defray administrative and general expenses of the Sugar Board, and to provide special concessions to certain consumers of sugar, while for that portion reserved for export, the price was fixed at a much lower figure, the latter of course being subject to realization adjustments. The embargo was later extended for a further period of three years until 1st August, 1931, on practically the same terms as heretofore Final calculations by the Sugar Board showed that 56 per cent. of the total production in 1925–26 was consumed in Australia, while the net value per ton of exported sugar was £11 5s. 9d., making the average price for the whole crop £19 10s. 7d. per ton.

Owing to the reduced production in the 1926–27 season 81½ per cent. was delivered for home consumption, and the net value of the surplus exported was £14 18s. 10d. per ton, making an average return of £24 10s. 10d. per ton.

In 1927–28 the percentage of the sugar crop retained for consumption was 68.82, the net value of the exportable surplus was £1,913,280, or £12 11s. 1d. per ton, and the average net return for the whole crop was £22 14s. 9d. per ton.

5. **Imports and Exports of Sugar.**—Owing to the embargo and the increased production of sugar in Australia, the imports have dwindled to insignificant proportions. Supplies to make up for local deficiencies are usually drawn from Java and Fiji. Particulars concerning the imports and exports of cane sugar for the past five years are as follows :—

CANE SUGAR.—IMPORTS AND EXPORTS, AUSTRALIA, 1922–23 TO 1926–27.

Year.	Oversea Imports.		Oversea Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	Tons.	£	Tons.	£	Tons.	£
1922–23	4,551	87,317	5,127	159,897	576	72,580
1923–24	525	12,200	15,591	443,183	15,066	430,983
1924–25	3,046	65,579	82,747	2,162,309	79,701	2,096,730
1925–26	345	9,425	208,805	5,313,135	208,460	5,303,710
1926–27	3,611	47,844	66,523	1,730,095	62,912	1,682,251

6. **Sugar By-products.**—Large quantities of molasses are produced as a by-product in the sugar mills, but, at present, much of it is allowed to run to waste. Details for a series of years of the quantity produced and the proportions used for distilling, fuel, manure and other purposes will be found in Chapter XXII.—"Manufacturing."

Keen interest has recently been aroused in the utilization of the by-products of sugar manufacture. A distillation plant erected at the Plane Creek Central Sugar Mill, Mackay, was opened during 1927 and alcohol of a very fine quality was produced, but operations were suspended pending the arrival from overseas and the installation of additional plant embodying new scientific developments and discoveries in the field of liquid fuel.

Steps are also being taken to launch an industry to undertake the manufacture of a building material known as "megass board" from megass or bagasse, i.e., the residuum of crushed fibre left over from the sugar cane after the removal of the sugar content. The Australian megass board is claimed to possess superior qualities to the "celotex" made from bagasse in America.

7. **Sugar Prices.**—The prices of sugar per ton of raw and refined sugar and the retail price in Australia from 1915 to date are given hereunder :—

AUSTRALIAN SUGAR PRICES, 1915 TO 1931.

Date.	Raw Sugar.			Refined Sugar.			
	Price to Grower and Miller per Ton.			Wholesale Price per Ton.			Retail Price per lb.
	£	*s.*	*d.*	£	*s.*	*d.*	*d.*
19.7.15 to 15.1.16	18	0	0	25	10	0	3
16.1.16 to 30.6.17	18	0	0	29	5	0	3½
1.7.17 to 24.3.20	21	0	0	29	5	0	3½
25.3.20 to 30.6.20	21	0	0	49	0	0	6
1.7.20 to 31.10.22	30	6	8	49	0	0	6
1.11.22 to 30.6.23	30	6	8	42	0	0	5
1.7.23 to 21.10.23	27	0	0	42	0	0	5
22.10.23 to 31.8.25	26	0	0	37	11	4	4½
1.9.25 to 31.8.31	(*a*)26	10	0	37	6	8	4½

(*a*) The price of raw sugar for the years 1925 to 1931 is estimated at £26 10s. per ton, but, as the result of the values received for the surpluses exported, the actual price obtained in 1925–26 was £19 10s. 7d.; in 1926–27, £24 10s. 10d.; and in 1927–28, £22 14s. 9d.

§ 15. Vineyards.

1. **Progress of Cultivation.**—(i) *Area of Vineyards.* The date of introduction of the vine into Australia has been variously set down by different investigators, the years 1815 and 1828 being principally favoured. It would seem, however, that plants were brought out with the first fleet in 1788, consequently the Australian vine is as old as Australian settlement. As already mentioned, a report by Governor Hunter gives the area under vines in 1797 as 8 acres. From New South Wales the cultivation spread to Victoria and South Australia, and these States have now far outstripped the mother State in the area under this crop. In Queensland and Western Australia also, vine-growing has been carried on for many years, but little progress has been made. In Tasmania the climate is not favourable to the growth of grapes. The purposes for which grapes are grown in Australia are three in number, viz. :—(*a*) for wine-making, (*b*) for table use, and (*c*) for drying. The total area under vines in the several States during each of the last five years is given in the following table, while particulars from 1860 onwards may be gathered from the graph accompanying this chapter :—

VINEYARDS.—AREA, 1922–23 TO 1926–27.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1922–23.. ..	13,734	38,892	1,242	46,750	4,858	There are no vineyards in Tasmania.	105,476
1923–24.. ..	14,559	42,599	1,269	49,303	5,235		112,965
1924–25.. ..	14,737	42,467	1,579	50,280	5,331		114,394
1925–26.. ..	14,465	40,712	1,656	50,594	5,270		112,697
1926–27.. ..	14,281	40,612	1,682	50,271	5,274		112,120

The area under vines in Australia amounted to 65,673 acres in 1904–5. From that year onwards a gradual decline set in, and at the end of 1914–15 the acreage had decreased to 60,985. Since that date, however, as the result of extensive plantings, particularly of the dried grape varieties, the 1904–5 figure was soon exceeded, and the total for 1924–25 was the highest on record. Marketing difficulties have temporarily hindered progress during the past two years.

The wine-growing industry in Australia, especially in Victoria and New South Wales, received a severe check by various outbreaks of phylloxera. With a view to the eradication of this disease extensive uprooting of vineyards in the infested areas was undertaken, while further planting within such areas, except with phylloxera-resistant stocks, was prohibited.

(ii) *Wine Production.* The production of wine has not increased as rapidly as the suitability of soil and climate would appear to warrant. The cause is probably twofold, being due in the first place to the fact that Australians are not a wine-drinking people, and consequently do not provide a local market for the product, and in the second, to the fact that the new and comparatively unknown wines of Australia find it difficult to establish a footing in the markets of the old world, owing to the competition of well-known brands. Active steps are now being taken to bring the Australian wines under notice, while the Commonwealth bounty on the export of fortified wine of specified strength has greatly benefited the industry during the past three years. The rate of bounty was fixed at 4s. per gallon, but from 1st September, 1927, the rate has been reduced to 1s. 9d. The date of expiry of the bounty is set down as 31st August, 1930.

Particulars of the quantity of wine produced in the several States during the past five seasons are given in the table hereunder :—

WINE.—PRODUCTION, 1922–23 TO 1926–27.

Season.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
	Gallons.	Gallons.	Gallons.	Gallons.	Gallons.		Gallons.
1922–23 ..	771,206	1,717,490	53,171	8,653,579	232,347	No production of wine in Tasmania.	11,427,793
1923–24 ..	1,459,778	2,177,127	37,242	10,756,538	233,196		14,663,881
1924–25 ..	1,171,264	1,368,765	33,119	10,502,381	223,761		13,299,290
1925–26 ..	1,240,893	1,637,274	39,375	13,074,874	238,726		16,231,142
1926–27 ..	1,625,507	2,346,314	32,974	16,159,595	291,951		20,456,341

(iii) *Relation to Population.* In relation to population the areas of the vineyards of the several States have varied little during the last five years, the Australian total declining slightly during the period, as the result of marketing difficulties already referred to. Details for the seasons 1922–23 to 1926–27 are given in the succeeding table :—

VINEYARDS.—AREA PER 1,000 OF POPULATION, 1922–23 TO 1926–27.

Season.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1922–23 ..	6	24	2	91	14	..	19
1923–24 ..	7	26	2	94	15	..	20
1924–25 ..	7	26	2	93	15	..	19
1925–26 ..	6	24	2	92	14	..	19
1926–27 ..	6	24	2	89	14	..	18

2. **Imports and Exports of Wine.**—(i) *Imports.* The principal countries of origin of wine imported into Australia are France, Spain, Portugal, and Italy, the bulk of the sparkling wines coming from France. Particulars relative to the importations of wine into Australia during the past five years are given hereunder :—

WINE.—IMPORTS, AUSTRALIA, 1922–23 TO 1926–27.

Year.	Quantity.			Value.		
	Sparkling.	Other.	Total.	Sparkling.	Other.	Total.
	Gallons.	Gallons.	Gallons.	£	£	£
1922–23 ..	15,368	43,199	58,567	41,305	32,692	73,997
1923–24 ..	21,770	54,988	76,758	56,069	38,434	94,503
1924–25 ..	28,324	52,999	81,323	72,042	33,743	105,785
1925–26 ..	25,896	61,511	87,407	65,763	37,432	103,195
1926–27 ..	27,720	61,878	89,598	64,134	37,325	101,459

(ii) *Exports.* The principal countries to which wine is exported from Australia are the United Kingdom and New Zealand, the bulk of the increased shipments during the past two years being consigned to the former country. Details concerning the exports of wine from Australia during the past five years are given in the following table :—

WINE.—EXPORTS, AUSTRALIA, 1922–23 TO 1926–27.

Year.	Quantity.			Value.		
	Sparkling.	Other.	Total.	Sparkling.	Other.	Total.
	Gallons.	Gallons.	Gallons.	£	£	£
1922–23 ..	2,607	703,710	706,317	5,626	159,368	164,994
1923–24 ..	3,601	987,703	991,304	7,180	210,132	217,312
1924–25 ..	4,003	877,466	881,469	8,304	180,387	188,691
1925–26 ..	3,564	1,719,045	1,722,609	7,156	364,766	371,922
1926–27 ..	2,956	3,078,841	3,081,797	6,075	827,722	833,797

3. Other Viticultural Products.—(i) *Table Grapes.* In adddition to grapes for wine-making purposes, large quantities are grown in all the States for table use, but the greatest development in the industry has taken place in the drying of raisins and currants, particularly in Victoria and South Australia. The quantities of table grapes grown in the several States during the past five seasons are as follows :—

TABLE GRAPES.—PRODUCTION, 1922–23 TO 1926–27.

Season.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1922–23 ..	3,513	3,304	570	1,314	2,344	..	11,045
1923–24 ..	3,983	2,726	1,038	1,056	2,662	..	11,465
1924–25 ..	3,590	2,672	961	1,156	2,069	..	10,448
1925–26 ..	3,837	3,616	996	1,063	2,284	..	11,796
1926–27 ..	4,689	4,634	1,410	791	2,195	..	13,719

(ii) *Raisins and Currants.* Statistics of the quantities of raisins and currants dried during each of the past five seasons are given in the following table :—

RAISINS AND CURRANTS.—QUANTITIES DRIED, 1922–23 TO 1926–27.

Season.	N.S. Wales.		Victoria.		South Aust.		Western Aust.		Australia.	
	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.
	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.
1922–23 ..	11,253	5,768	285,520	98,081	69,261	96,807	6,748	9,250	372,782	209,906
1923–24 ..	16,967	6,658	438,827	150,867	125,006	131,000	9,606	15,769	590,406	304,294
1924–25 ..	19,180	5,953	366,999	104,948	139,385	109,446	7,940	12,689	533,504	233,036
1925–26 ..	23,168	6,132	351,506	123,733	111,261	103,910	9,631	10,919	495,566	244,694
1926–27 ..	41,064	9,106	657,714	135,464	162,401	87,662	8,861	22,936	870,040	255,168
Average 10 seasons 1917–27	13,687	4,709	285,918	92,875	84,329	86,282	6,367	9,299	390,301	193,165

4. **Imports and Exports of Raisins and Currants.**—The following table gives the oversea imports and exports of raisins and currants during each of the past five years :—

RAISINS AND CURRANTS.—IMPORTS AND EXPORTS, AUSTRALIA, 1922–23 TO 1926–27.

Year.	Oversea Imports.		Oversea Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
			RAISINS.			
	lbs.	£	lbs.	£	lbs.	£
1922–23 ..	81,018	5,292	19,240,729	721,641	19,159,711	716,349
1923–24 ..	433,907	8,137	26,399,830	803,365	25,965,923	795,228
1924–25 ..	193,372	8,682	56,046,855	1,392,566	55,853,483	1,383,884
1925–26 ..	103,094	5,224	35,556,767	1,026,339	35,453,673	1,021,115
1926–27 ..	98,317	5,385	44,078,938	1,265,994	43,980,621	1,260,609
			CURRANTS.			
1922–23 ..	3,236	90	14,502,772	404,184	14,499,536	404,094
1923–24 ..	4,267	178	16,458,561	420,380	16,454,294	420,202
1924–25 ..	7,852	231	21,558,804	509,179	21,550,952	508,948
1925–26 ..	15,147	494	18,844,854	402,283	18,829,707	401,789
1926–27 ..	5,202	173	19,210,967	377,895	19,205,765	377,722

The quantities of raisins and currants imported into Australia were generally greater than the exports for all years prior to 1912, when the increased production in Australia left a surplus available for export. During the last five years the value of the exports exceeded that of the imports by £7,289,940, the average annual excess for the quinquennium being £1,457,988.

§ 16. Orchards and Fruit Gardens.

1. **Progress of Cultivation.**—(i) *Area.* The maximum area under orchards and fruit gardens was recorded in 1921–22, when 281,149 acres were planted. Since that year the industry has declined slightly owing to difficulties experienced in disposing of the surplus production. The total area under orchards and fruit gardens in the several States is given in the following table :—

ORCHARDS AND FRUIT GARDENS.—AREA, 1922–23 TO 1926–27.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1922–23 ..	73,134	86,014	29,431	33,003	19,405	34,689	11	275,687
1923–24 ..	72,372	85,570	29,568	33,472	18,776	34,076	11	273,845
1924–25 ..	73,972	85,358	31,738	33,319	18,520	33,992	5	276,904
1925–26 ..	74,532	82,665	33,520	32,276	18,355	33,891	6	275,245
1926–27 ..	74,682	83,215	35,145	31,570	18,512	33,322	5	276,451

(ii) *Varieties and Yield.* The varieties grown differ in various parts of the States, ranging from such fruits as the pineapple, paw-paw, mango, and guava of the tropics to the strawberry, the raspberry, and the currant of the colder parts of the temperate zone. The principal varieties grown in Victoria are the apple, peach, pear, orange, plum, and apricot. In New South Wales, citrus fruits (oranges, lemons, etc.) occupy the leading position, although apples, peaches, plums, pears, cherries and bananas are extensively grown. In Queensland, the banana, the pineapple, the apple, the orange, the peach, the plum, and the coconut are the varieties most largely cultivated. In South Australia, in addition to the apple, orange, apricot, plum, peach, and pear, the almond and the olive are extensively grown. In Western Australia, the apple, orange, pear, plum, peach, apricot and fig are the chief varieties. In Tasmania, the apple occupies nearly four-fifths of the fruit growing area, but small fruits, such as the currant, raspberry, and gooseberry are extensively grown, while the balance of the area is taken up with the pear, apricot, plum, and cherry. The following table gives the acreage under the principal kinds of fruit, and the quantity and value of fruit produced. The acreages are exclusive of young trees not yet bearing. Although statistics of area are not collected annually in Victoria, the acreage under each class of fruit is estimated from data based on the triennial collection of the number of trees, subject to annual variations in the total area under orchards and fruit gardens :—

ORCHARDS AND FRUIT GARDENS.—VARIETIES, YIELD, AND VALUE, 1926-27.

Fruit.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Fed. Cap. Ter.	Australia.
Apples ..	acres	14,082	33,314	4,208	10,487	9,893	26,338	5	98,322
	bushels	407,868	543,106	113,810	361,712	901,464	2,900,000	515	5,228,475
	£	252,370	230,820	63,425	180,067	581,256	1,169,450	320	2,477,708
Apricots ..	acres	2,101	5,200	98	3,563	729	1,570	..	13,261
	bushels	188,016	440,423	2,188	253,035	45,437	43,200	4	972,303
	£	86,628	165,159	1,185	99,997	27,262	13,500	2	393,733
Bananas ..	acres	1,846	..	16,489	..	10	..	..	18,345
	bushels	96,814	..	2,066,096	..	435	..	..	2,163,345
	£	69,920	..	660,003	..	653	..	..	730,576
Cherries ..	acres	3,344	1,566	12	762	..	68	..	5,752
	bushels	52,232	29,817	287	16,359	..	1,950	4	100,649
	£	86,135	29,817	182	17,995	..	920	5	135,054
Lemons ..	acres	2,905	2,115	209	482	562	..	..	6,273
	bushels	289,734	131,154	19,158	42,584	55,288	..	..	537,918
	£	118,320	57,380	5,428	15,969	27,354	..	..	224,451
Nectarines and Peaches	acres	8,481	12,357	1,903	2,835	1,065	70	..	26,711
	bshls.	604,616	934,597	87,628	172,445	65,029	3,630	16	1,867,961
	£	379,488	396,521	29,441	69,203	46,620	1,400	12	922,685
Nuts ..	acres	607	565	..	1,640	..	..	..	2,812
	lbs.	97,272	115,123	..	606,368	..	..	..	818,763
	£	3,960	4,820	..	31,031	..	..	..	39,811
Oranges ..	acres	28,576	6,351	3,899	4,931	3,259	..	..	47,016
	bushels	1,967,916	286,216	283,775	378,378	213,697	..	..	3,129,982
	£	1,020,710	150,263	162,579	196,775	139,249	..	..	1,669,576
Pineapples ..	acres	68	..	4,235	..	..	..	..	4,303
	dozen	12,150	..	953,248	..	..	..	..	965,398
	£	3,240	..	314,770	..	..	..	..	318,010
Pears ..	acres	4,604	11,566	261	2,359	1,129	2,095	..	22,014
	bushels	185,412	500,995	8,490	136,601	93,066	242,000	2	1,166,566
	£	91,829	175,348	5,625	49,926	41,298	83,100	1	447,127
Plums ..	acres	6,564	5,406	1,336	3,138	961	670	..	18,070
	bushels	199,540	209,781	41,963	107,691	62,414	54,200	3	675,595
	£	112,898	61,082	20,195	42,070	37,448	14,000	2	287,695
Small fruits ..	acres	28	1,170	92	271	56	2,455	..	4,072
	cwt.	1,594	6,192	1,482	4,593	528	110,540	..	124,929
	£	3,530	16,922	11,058	10,536	2,915	162,950	..	207,911
Other fruits ..	acres	1,476	3,605	2,408	1,107	848	56	..	9,500
	£	77,940	147,623	75,730	19,017	22,414	590	..	343,314
Total acres ..		74,682	83,215	35,145	31,570	18,512	33,322	5	276,451
	£	2,306,968	1,435,755	1,349,621	732,586	926,469	1,445,910	342	8,197,651

(iii) *Relation to Population.* The acreage of the orchards and fruit gardens of Australia in relation to population declined during the past five years. The Australian figure for 1926–27 amounted to 0.045 acres per head, whilst the range amongst the States varied from 0.032 in New South Wales to 0.155 acres in Tasmania. Details for orchards and fruit gardens for the years 1922–23 to 1926–27 are as follows :—

ORCHARDS AND FRUIT GARDENS.—AREA PER 1,000 OF POPULATION, 1922–23 TO 1926–27.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1922–23 ..	34	54	37	64	56	158	..	4	49
1923–24 ..	33	53	37	64	53	156	..	4	48
1924–25 ..	33	52	38	62	51	156	..	2	47
1925–26 ..	32	49	39	59	49	156	..	2	46
1926–27 ..	32	49	40	56	49	155	..	1	45

2. **Imports and Exports of Fruit.**—(i) *General.* A considerable export trade in both fresh and dried fruits is carried on by Australia with oversea countries. The import trade in fresh fruits declined heavily during the past five years, owing to the imposition of a Customs duty of 1d. per lb. on imported bananas, which had hitherto been the chief item of fresh fruit imported into Australia. The imports of dried fruits at present consist mainly of dates from Iraq. The export trade in both fruits, however, has greatly expanded during the past quinquennium, the value of the shipments during 1926–27 amounting to £2,454,726. Apples constitute the bulk of the fresh fruit exported, although the exports of citrus fruits and pears are fairly considerable, and experiments are being conducted in regard to the dispatch of other fruits. Shipments of raisins and currants have developed into large proportions since 1914–15, and are mainly responsible for the increase in the dried fruits exports. Other fruits in the dried state, notably apricots, are also receiving attention from overseas.

(ii) *Fresh Fruits.* Information with regard to the Australian oversea trade in fresh fruits is given hereunder :—

FRESH FRUITS.—IMPORTS AND EXPORTS, AUSTRALIA, 1922–23 TO 1926–27.

Year.	Oversea Imports.		Oversea Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	lbs.	£	lbs.	£	lbs.	£
1922–23..	2,390,600	28,103	108,391,900	1,040,310	106,001,300	1,012,207
1923–24..	3,473,300	47,343	78,927,000	870,260	75,453,700	822,917
1924–25..	3,228,200	32,009	101,348,900	1,089,544	98,120,700	1,057,535
1925–26..	3,228,900	35,154	149,673,100	1,553,651	146,444,200	1,518,497
1926–27..	5,086,900	56,932	75,776,600	805,573	70,689,700	748,641

The value of the exports of apples in 1926–27 amounted to £624,040, and of citrus fruits to £80,548.

(iii) *Dried Fruits.* Particulars of oversea imports and exports of dried fruits for the last five years are as follows :—

DRIED FRUITS (*a*).—IMPORTS AND EXPORTS, AUSTRALIA, 1922–23 TO 1926–27.

Year.	Oversea Imports.		Oversea Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	lbs.	£	lbs.	£	lbs.	£
1922–23..	10,957,699	189,397	36,047,962	1,232,124	25,090,263	1,042,727
1923–24..	11,091,289	167,366	43.581,329	1,243,272	32,490,040	1,075,906
1924–25..	9,429,764	136,185	78,952,737	1,939,829	69.522,973	1,803.644
1925–26..	11,787,309	141,922	55 428.846	1,463,417	43.641.537	1,321,495
1926–27..	11,318,200	173,962	63,503,400	1,649,153	52,185,200	1,475,191

(*a*) Including raisins and currants referred to under Vineyards, § 15, 4.

(iv) *Jams and Jellies.* Jams and jellies were exported in large quantities during the war years, and in 1918–19 the record shipment of 79,277,560 lbs., valued at £1,847,970, was despatched from Australia. Since that year, however, the trade has been lost, the value of the exports in 1926–27 amounting to only £72,354. Particulars relative to imports and exports during each of the last five years are as follows :—

JAMS AND JELLIES.—IMPORTS AND EXPORTS, AUSTRALIA, 1922–23 TO 1926–27.

Year.	Oversea Imports.		Oversea Exports.		Net Exports.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	lbs.	£	lbs.	£	lbs.	£
1922–23..	151,572	8,253	2,605,554	79,396	2,453.982	71,143
1923–24..	138,219	7,597	2,680,047	85,062	2,541,828	77,465
1924–25..	226.253	10,810	2,470.431	74,464	2,244,178	63,654
1925–26..	190,302	8,813	2,665,243	82,447	2,474,941	73,634
1926–27..	357,838	15,004	2,422,988	72,354	2,065,150	57,350

(v) *Preserved Fruit.* Details concerning the quantities and values of preserved fruit imported into Australia cannot readily be obtained, owing to the fact that in the Customs returns particulars concerning fruit and vegetables are in certain cases combined. The total value of fruit and vegetables preserved or partly preserved in liquid, or pulped, imported into Australia during 1926–27 was £248,830. Particulars in respect of exports are available, and the following shipments were sent overseas in 1926–27 :—Apricots, 1,884,985 lbs., £40,128 ; peaches, 6,090,295 lbs., £167,582 ; pears, 737,170 lbs., £16,782 ; pineapples, 7,573 lbs., £230 ; and other, 526,956 lbs., £15,189 or a total shipment of £239,911.

§ 17. Minor Crops.

1. **General.**—In addition to the crops previously dealt with, there are many others which, owing either to their nature, or to the fact that their cultivation has advanced but little beyond the experimental stage, do not occupy so prominent a position. Some of the more important of these are included under the headings—Market Gardens,

Pumpkins and Melons, Nurseries, Grass Seed, Tobacco, and Millet. Cotton-growing has recently received considerable attention in the tropical portions of Australia, and the prospects of establishing this industry on a large scale are very favourable. The total area in Australia during the season 1926–27, devoted to crops not dealt with in previous sections, was 111,124 acres, the major portion of which consisted of cotton and market gardens.

2. **Market Gardens.**—Under this head are included all areas on which mixed vegetables are grown. Where considerable areas are devoted to the production of one vegetable, such for instance as the potato, the onion, the melon, the tomato, etc., the figures are usually not included with market gardens, but are shown either under some specific head, or under some general head as "Other Root Crops," or "All Other Crops." The area under market gardens during each of the last five seasons is given hereunder :—

MARKET GARDENS.—AREA, 1922–23 TO 1926–27.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Fed. Cap. Ter.	Australia.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
1922–23 ..	7,743	14,108	1,838	1,438	2,698	540	..	18	28,383
1923–24 ..	8,526	16,212	1,719	1,448	2,259	478	..	17	30.659
1924–25 ..	8,824	14,620	1,619	1,577	2,913	576	..	13	30,142
1925–26 ..	8,973	16,609	1,017	1,517	2,725	587	..	12	31,440
1926–27 ..	8,184	17,751	1,096	1,320	2,872	599	..	46	31,868

3. **Grass Seed.**—The total area under this crop during 1926–27, exclusive of New South Wales, for which State complete figures as to area are not available, was 3,082 acres, of which 879 acres were in Victoria, 672 acres in Tasmania, 630 acres in Queensland, and 855 acres in South Australia. The total yield for 1926–27, including New South Wales, was 25,302 bushels, valued at £44,322. In addition to the areas planted above, 341 acres were sown to canary seed in Queensland during 1926–27, and furnished a yield of 337 bushels, valued at £379.

4. **Tobacco.**—Tobacco-growing has undergone marked fluctuations, although at one time it promised to occupy an important place amongst the agricultural industries of Australia. Thus, as early as the season 1888–89, the area under this crop amounted to as much as 6,641 acres, of which 4,833 were in New South Wales, 1,685 in Victoria, and 123 in Queensland. This promise of importance was, however, not fulfilled, and after numerous fluctuations, in the course of which the Victorian area rose in 1895 to over 2,000 acres, and that in Queensland to over 1,000 acres, the total area for the season 1920–21 had declined to 1,345 acres. Since that date the area has again fluctuated, but with an upward tendency, and in 1926–27 2,192 acres were planted, of which 881 were in New South Wales, 1,154 in Victoria, 125 in Queensland, 27 in South Australia, and 5 in Western Australia. Greater attention is now being paid to the proper treatment of the leaf, and flue-curing is becoming more general. In all the States in which its cultivation had been tried, the soil and climate appear to be very suitable for the growth of the plant, and the enormous importations of tobacco in its various forms into Australia furnish an indication of the extensive local market which exists for an article grown and prepared to meet the requirements of consumers. The value of the net importations of tobacco into Australia during the year 1926–27 amounted to £2,483,612, comprising unmanufactured tobacco £2,018,153, cigars £112,155, cigarettes £370,811, and snuff £1,667. while manufactured tobacco revealed a balance in favour of exports amounting to 194,012. Important proposals for the development of the tobacco-growing industry in Australia have recently been formulated. The British-Australasian Tobacco Co. and the Commonwealth Government have entered into an agreement whereby the sum of £90,000 is to be spent to carry out exhaustive

tests to determine the capabilities of Australia to produce enough tobacco for her own requirements. The terms of the agreement are that over a first period of three years the company shall contribute a sum of £20,000 for investigation and field-testing, and that the Commonwealth and State Governments shall provide £10,000. If at the expiration of this period the work has progressed satisfactorily enough to warrant further expenditure, the company will contribute an additional £30,000, and the Governments £30,000 for expenditure over a further period. A sum of £90,000 will thus be made available as necessary, and of this sum the company is finding £50,000. The company has also consented to buy for the three seasons, 1927, 1928 and 1929, tobacco crops, properly graded, of lemon-coloured tobacco at 2s. 6d. a pound, bright mahogany at 2s. a pound, and dark mahogany at 1s. 6d. a pound, and has offered a bonus of 6d. per lb. for the purpose of stimulating the production of the first two varieties. An executive committee has been formed, and the Federal Director is now engaged in carrying out the investigations.

5. **Pumpkins and Melons.**—The total area under this crop in Australia during 1926–27 was 12,603 acres, of which 4,097 acres were in New South Wales, 1,590 acres in Victoria, 5,969 acres in Queensland, 643 acres in Western Australia, and 304 acres in South Australia. The production in all the States amounted to 38,014 tons.

6. **Hops.**—Hop-growing in Australia is practically confined to Tasmania and some of the cooler districts of Victoria, the total area for the season 1926–27 being 1,571 acres, of which 1,374 acres were in Tasmania, 196 acres in Victoria, and 1 acre in South Australia. The Tasmanian area, though still small, has increased considerably during the past twenty years, the total for the season 1901–2 being only 599 acres. In Victoria the area, which in 1901–2 was 307 acres, dwindled to 71 acres in 1918–19, then rose to 312 acres in 1925–26 and dropped to 196 in 1926–27. The cultivation of hops was much more extensive in Victoria some 40 years ago than at present, the area in 1883–84 being no less than 1,758 acres. During the year 1926–27 the imports of hops exceeded the exports by 96,786 lbs., the excess value being £9,800.

7. **Flax.**—For over twenty years flax has been grown intermittently in the Gippsland district of Victoria, and attempts have been made to introduce its cultivation into Tasmania and New South Wales, but without success. About the end of the year 1917 the shortage of flax fibre in the world had become acute, and endeavours were made by the Commonwealth Government to encourage the cultivation of flax. The acreage in Victoria increased from 419 acres in 1917–18 to 1,611 acres in 1919–20, but the area had declined in 1926–27 to 388 acres. Flax products to the value of more than £1,500,000 are annually imported into Australia, and, as it has been demonstrated that flax can be grown to perfection here, good prospects exist for the ultimate establishment of a local industry.

8. **Millet.**—Millet figures in the statistical records of three of the States. The total area devoted thereto in 1926–27 was 4,890 acres, of which 3,046 acres were in New South Wales, 1,493 in Victoria, and 351 in Queensland. The particulars here given relate to millet grown for grain and fibre, the quantity for green forage being dealt with in the section relating thereto.

9. **Nurseries.**—In all the States fairly large areas are occupied as nurseries for raising plants, trees, etc. Statistics of the area under flowers, fruit trees, etc., are available for New South Wales, Victoria, South Australia, and Western Australia. During 1926–27 the areas in those States were 650, 815, 125, and 61 acres respectively.

10. **Cotton.**—The cultivation of cotton was begun in Queensland in 1860, and ten years later the area cropped had increased from fourteen to upwards of fourteen thousand acres. The re-appearance of American cotton in the European market on the conclusion of the Civil War gave a severe setback to the new industry, and the area declined continuously till 1888 when only 37 acres were planted. The industry was resuscitated soon after, and manufacturing was undertaken on two separate occasions at Ipswich, but operations were at no time very extensive, and low prices over a term of years checked development. Added interest was shown in the crop in 1903, and in 1913 the Queensland Government made an advance of 1½d. per lb. on seed cotton, and ginned it on owner's account, the final return being equal to about 1¾d. per lb.

Rising prices for the staple enabled the Government to offer the substantial guarantee of 5½d. per lb. for seed cotton of good quality for the three years ended 31st July, 1923, and as the result considerable activity was displayed in the industry, the area picked rising from 166 acres in 1920 to 50.186 in 1924. Government guarantees were continued until 1926, when the Commonwealth Government granted a bounty of 1½d. per lb. on the better grades, and ¾d. on the lower grades of seed cotton grown in Australia. In addition to this direct assistance to the cotton-growing industry, the Government subsidized the cotton-manufacturing industry by granting a graduated bounty varying from ⅓d. to 1s. per lb. on all cotton yarn manufactured in Australia which contained 50 per cent. of home-grown cotton. The object of this policy is to foster and establish the primary and secondary industries concurrently, thus creating a home market for the raw cotton produced.

The area under cultivation and the yield in Queensland since the year 1919 are shown hereunder :—

COTTON.—AREA AND YIELD, QUEENSLAND, 1919 TO 1928.

Year.	Area.(*a*)	Yield of Unginned Cotton.
	Acres.	lbs.
1919	72	27,470
1920	166	57,065
1921	1,944	940,126
1922	8,716	3,956,635
1923	40,821	12,543,770
1924	50,186	16,416,170
1925	40,062	19,537,274
1926	18,743	9,059,907
1927	(*c*)	7,054,951
1928 (*b*)	(*c*)	12,175,000

(*a*) Area harvested. (*b*) Estimated. (*c*) Not available.

Consequent upon the lapse of the Government guarantees and the change over to the bounty system, a cotton pool was formed in Queensland under the Primary Products Pools Act and a cotton board was elected to control the handling, financing, and marketing of all cotton grown in the State. The whole of the output in 1927 was sold to Australian spinners on the basis of import parity prices, the net return to growers, including the bounty, being 5d. per lb. for top grade seed cotton. Owing to the curtailed demand by Australian manufacturers, the bulk of the 1928 output will have to be disposed of in the Liverpool market.

11. **Coffee.**—Queensland is the only State in which coffee-growing has been extensively tried, but the results have not been satisfactory. The area under crop reached its highest point in the season 1901–2 with 547 acres. In subsequent seasons the area fluctuated somewhat, but on the whole with a downward tendency, and in 1926–27 only 19 acres were recorded, with a yield of 8,798 lbs.

12. **Other Crops.**—Amongst miscellaneous small crops grown in the several States may be mentioned tomatoes, rhubarb, artichokes, arrowroot, chicory, and flowers.

§ 18. Bounties.

1. **General.**—The Bounties Acts and Amendments passed by the Federal Parliament with the object of encouraging the manufacture and production of certain articles in Australia, include among the items on which bonuses were payable since 1923–24 the following agricultural products :—Cotton, wine and canned fruits. In the table hereunder are shown the amounts which have been paid in respect of all bounties in operation during the years 1923–24 to 1927–28 :—

BOUNTIES.—AMOUNTS PAID, 1923-24 TO 1927-28.

Articles on which Bounty was Paid.	Rate of Bounty Payable.	Date of Expiry of Bounty.	Amount Paid.				
			1923–24.	1924–25.	1925–26.	1926–27	1927–28.
			£	£	£	£	£
Shale Oil Bounties Act—							
Crude Shale Oil, as prescribed, produced in Australia from Mined Kerosene Shale ..	3½d. per gal., up to 3,500,000 gals. 2d. per gal., 3,500,000 to 5,000,000 gals. 1¾d. per gal., 5,000,000 to 8,000,000 gals. 1½d. each additional gal.	31st Aug., 1929 ..	..	335	..	705	428
Iron and Steel Products Bounty Act—							
Fencing Wire } Manufactured from Materials produced and manufactured in Australia	£2 12s. per ton	..	53,487	71,948	97,387	98,389	104,485
Galvanized Sheets ..	£2 12s. „ (*a*)	..	39,758	44,545	49,221	67,915	65,128
Wire Netting	£3 8s. „ ..	..	64,768	90,340	95,127	90,299	73,873
Traction Engines	According to capacity, £40—£90 per tractor	..	1,420	500	270	250	140
Sulphur Bounty Act—							
Sulphur from Australian Pyrites and other Sulphide Ores or Concentrates ..	£2 5s. per ton ..	..	9,382	47,140	38,549	34,339	57,377
Meat Export Bounties Act—							
Standard and Canned Beef slaughtered and exported within prescribed dates ..	Standard beef, ¼d. per lb. .. Canned beef, ¼d. per lb. ..	..	136,900	1,039	..	..	..
Export of Live Cattle for slaughter during prescribed period	Live cattle, 10s. per head ..	..	3,632	3,991	919	..	..
Wine Export Bounty Act—							
Fortified Wine, containing not less than 34 per centum of proof spirit, exported from the Commonwealth from 1st September, 1924, to 31st August, 1930	4s. per gallon to 31st August, 1927 1s. 9d. per gallon from 1st September, 1927, to 31st August, 1930	..	..	28,417	217 109	442,410	482,843

(*a*) Amount of bounty raised to £3 12s. per ton from 1st January, 1928.

BOUNTIES.—AMOUNTS PAID, 1923-24 TO 1927-28—*continued.*

Articles on which Bounty was Paid.	Rate of Bounty Payable.	Date of Expiry of Bounty.	Amount Paid.				
			1923-24.	1924-25.	1925-26.	1926-27.	1927-28.
			£	£	£	£	£
Canned Fruit Bounty Act— Apricots, Peaches, Pears, and Pineapples canned within prescribed dates ..	9d. to 1s. per dozen tins each containing 30 ozs. net ..	..	63,477	64,752	10,963	..	4,731
Such canned fruit exported from the Commonwealth during prescribed period ..	1s. to 1s. 9d. per dozen tins, each containing 30 ozs. net ..	..					
Cotton Bounty Act— Seed Cotton grown in Australia and delivered and graded as prescribed ..	1½d. per lb. higher grades ¾d. per lb. lower grades	15th Aug., 1931	..	..	..	7,038	81,454
Cotton Yarn manufactured in Australia	½d. to 12d. per lb. according to count	..	..	..	..	30,002	24,846
Papua and New Guinea Bounties Act— Cocoa and coffee beans (*a*) produced in these Territories imported into the Commonwealth for home consumption	1½d. per lb. ..	31st Dec., 1936	..	..	..	..	194
Total	.. ..	..	372,824	353,007	509,545	771,347	895,499

(*a*) Other goods are scheduled in this Act, but no importations of them were made.

§ 19. Fertilizers.

1. **General.**—In the early days of settlement in Australia, scientific cultivation was practically neglected. Farmers were neither under the necessity nor were they aware of the value of supplying the proper constituents to the soil for each class of crop. The widely divergent character of the soils, their degeneration by repeated cropping, the limitations of climatic conditions, and the difficulties of following any desired order of rotation of crops, all rendered it essential to give attention to artificial manuring. The introduction of the modern seed-drill acting also as a fertilizer-distributor has greatly facilitated the use of artificial manures, and much land formerly regarded as useless for cultivation has now been made productive. There is reason to believe that this feature will be even more strikingly characteristic in the future.

2. **Fertilizers Acts.**—In order to protect the interests of users of artificial manures, legislation has been passed in each of the States, regulating the sale and preventing the adulteration of fertilizers. A list of these Acts and their main features will be found in Year Book No. 12 (page 378).

3. **Imports.**—The local production of artificial manures has greatly increased in recent years, and the home requirements of prepared fertilizers can now be supplied by Australian manufacturers. Imports of fertilizers are also expanding, but the bulk of the inward shipments consists of rock phosphates, which form the raw material for the home manufactured superphosphate, a fertilizer which has proved eminently suitable for the growing of cereals in Australian soils. During 1926-27, the value of rock phosphates imported represented more than 88 per cent. of the total importation of fertilizers. Nauru and Gilbert and Ellice Islands Colony in equal proportions supplied practically the whole of the shipments. Sodium nitrate is wholly obtained from Chile.

The imports of artificial manures during the last five years are given in the following table. Although considerable quantities of manufactured superphosphates were annually imported up till 1914–15, the importations of this fertilizer have now practically ceased :—

FERTILIZERS.—IMPORTS, AUSTRALIA, 1922–23 TO 1926–27.

Fertilizer.		1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
Bonedust	cwt.	..	542	..	..	100
„	£	..	164	..	..	58
Guano	cwt.	857,411	821,938	893,478	1,829	20,826
„	£	97,526	90,415	98,515	1,061	1,238
Superphosphates ..	cwt.	1,007	1,270	1,200	1,035	1,201
„ ..	£	660	806	785	517	573
Rock Phosphates ..	cwt.	3,390,089	4,697,574	5,751,583	6,463,733	10,171,652
„ „ ..	£	516,059	678,446	739,588	799,273	1,109,414
Soda Nitrate	cwt.	143,274	74,990	182,846	187,284	100,567
„ „	£	96,083	45,358	104,729	105,384	60,951
Other	cwt.	175,778	138,897	186,209	172,993	187,773
„	£	80,720	74,403	79,616	80,900	87,281
Total	cwt.	4,567,559	5,735,211	7,015,316	6,826,874	10,482,119
	£	791,048	889,592	1,023,233	987,135	1,259,515

4. **Exports.**—The subjoined table shows the exports of artificial manures for the years 1922–23 to 1926–27. Practically the whole of these fertilizers are manufactured locally, and are shipped mainly to New Zealand, Japan, Java, and the Pacific Islands :—

FERTILIZERS.—EXPORTS, AUSTRALIA, 1922–23 TO 1926–27.

Fertilizer.		1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
Bonedust	cwt.	54,385	49,966	13,942	10,012	2,668
„	£	24,400	22,327	6,079	3,664	1,220
Superphosphates ..	cwt.	73	22	57	149	21
„	£	35	7	18	49	18
Rock phosphates ..	cwt.	..	20	..	62	200
„ „ ..	£	..	10	..	24	58
Soda nitrate	cwt.	600	405	2,529	1,445	398
„ „	£	715	315	1,851	1,241	311
Ammonia sulphate ..	cwt.	68,799	93,157	111,594	141,866	99,928
„ „ ..	£	58,571	69,491	73,665	88,745	61,478
Other	cwt.	34,323	31,431	45,098	124,263	39,718
„	£	15,816	11,824	13,916	47,011	16,237
Total	cwt.	158,180	175,001	173,220	277,797	142,933
	£	99,537	103,974	95,529	140,734	79,322

5. Statistics of Use of Fertilizers.—Statistics regarding the use of manures are collected in all the States, and the particulars for 1926–27 are as follows:—

FERTILIZERS USED IN EACH STATE, 1926–27.

State or Territory.	Total Area of Crops.	Area Manured.		Manure Used.	
		Aggregate.	Percentage on Total Area of Crops.	Natural (Stable Yard, etc.).	Artificial.
	Acres.	Acres.	%	Loads.	Tons.
New South Wales ..	4,593,847	2,892,074	62.96	197,898	94,003
Victoria	4,735,173	4,601,239	97.17	142,334	214,234
Queensland	941,783	67,844	7.20	63,195	19,019
South Australia ..	3,883,920	3,542,466	91.21	74,119	146,910
Western Australia ..	3,324,523	*a*3,431,427	*b*98.64	70,320	*a*145,795
Tasmania	289,364	233,885	80.83	14,183	21,633
Northern Territory ..	440	50	11.36	..	10
Fed. Cap. Territory ..	3,449	1,513	43.87	6	907
Total	17,772,499	14,770,498	83.11	562,055	642,511

(*a*) Includes area under sown grasses and manure used.——(*b*) Previous year's figure.

Similar particulars in respect of Australia as a whole during the past five years are as shown below:—

FERTILIZERS USED IN AUSTRALIA, 1922–23 TO 1926–27.

Year.	Total Area of Crops.	Area Manured.		Manure Used.	
		Aggregate.	Percentage on Total Area of Crops.	Natural (Stable Yard, etc.).	Artificial.
	Acres.	Acres.	%	Loads.	Tons.
1922–23	16,543,555	12,131,831	73.33	616,804	463,673
1923–24	16,531,186	12,084,583	73.10	590,900	488,601
1924–25	17,278,191	13,031,329	75.14	534,702	529,027
1925–26	16,793,578	13,387,111	78.98	625,099	576,786
1926–27	17,772,499	14,770,498	83.11	562,055	642,511

The percentage of the area manured on the total area cultivated has advanced from 73.33 to 83.11 during the past five years, while the use of artificial manures has increased by more than 178,000 tons during the same period.

6. Local Production of Fertilizers.—Statistics relative to the local production of fertilizers are incomplete, and detailed returns for fertilizer factories other than bone mills are not available. The number of firms engaged in the manufacture of artificial manures in Australia at latest available date was 104, made up as follows:—New South Wales, 20; Victoria, 30; Queensland, 24; South Australia, 11; Western Australia, 11; and Tasmania, 8. The production of superphosphates in Australia during 1926–27 amounted to 731,454 tons, the largest producing States being Victoria and Western Australia.

§ 20. Ensilage.

1. Government Assistance in Production.—The Government of Victoria, recognizing that defective methods of making ensilage were often adopted, has for some years been making special efforts to educate the farming community by lectures, the issue of bulletins, etc. The Government also undertakes the erection of different types of silos on very liberal terms, repayment extending over a series of years. Experts erect the silos and give practical lessons in regard to cutting and packing the silage. The New South Wales Government also gives advice in the "Agricultural Gazette," and issues special bulletins dealing with the subject, while silos have been erected at the various experimental farms.

2. Quantity Made.—Particulars concerning the number of holdings on which ensilage was made, and the quantity made during the seasons 1922–23 to 1926–27, are given in the following table :—

ENSILAGE MADE, 1922–23 TO 1926–27.

State or Territory.	1922–23.		1923–24.		1924–25.		1925–26.		1926–27.	
	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.	Holdings.	Ensilage Made.
	(a) No.	Tons.	(a) No.	Tons.	(a) No.	Tons.	(a) No.	Tons.	(a) No.	Tons.
New South Wales ..	116	12,191	152	19,292	269	35,145	241	30,457	407	48,718
Victoria	103	5,674	61	3,649	106	6,667	113	6,092	94	6,132
Queensland	65	5,300	71	4,833	104	8,195	67	4,654	50	4,728
South Australia ..	26	2,595	24	2,838	20	2,067	28	2,857	23	2,405
Western Australia ..	12	331	20	1,596	29	2,287	43	3,325	72	5,642
Tasmania	12	437	9	372	10	301	3	170	8	488
Northern Territory ..	..	..	..	..	1	5	1	5	..	..
Total ..	334	26,528	337	32,580	539	54,667	496	47,560	654	68,113

(a) No. of holdings on which ensilage was made.

Following the drought of 1902–3 greater attention was paid to the making of ensilage, and during the four seasons ended 1909–10 there was an increase both in the number of holdings on which ensilage was made and in the quantity produced. The following five seasons, however, showed a falling-off, but the reduction was due to the fact that stocks had not been drawn upon to any great extent during the previous seasons. The accumulated stocks proved of great value during the 1914 drought, though far below what would have been the case if more attention had been paid to production during the previous years when there was a surplus of green forage. The quantities made since that date have fluctuated considerably, with the output in 1926–27, viz., 68,113 tons, the highest for the period.

§ 21. Agricultural Colleges and Experimental Farms.

1. General.—In most of the States agricultural colleges and experimental farms have been established with a view to the promotion of more scientific methods in agriculture, stock-breeding and dairying. In the colleges, and on some of the farms, provision is made for the accommodation of pupils to whom both practical and theoretical instruction is given by experts in various branches of agriculture. Analyses of soils and fertilizers are made, manures are tested, and elementary veterinary science, etc., are taught, while general experimental work is carried on with cereal and other crops, not merely for the purpose of showing that it is practicable to produce certain crops in a given place, but also to show how it is possible to make farming pay in the locality. Opportunities are afforded for practice in general agricultural work, and instruction is given in the conservation of fodder ; in cheese and butter making ; in the management, breeding, and preparation for the market of live stock ; in the eradication of pests and weeds ; and in carpentering, blacksmithing, and other trades.

Travelling expert lecturers visit the various agricultural and dairying centres, and there is a wide distribution of periodical agricultural gazettes and bulletins.

2. Particulars of Agricultural Colleges and Experimental Farms.—In previous issues of this volume detailed information was given regarding agricultural colleges, experimental farms, and agricultural education generally. See Year Book No. 11, pp. 393–5.

3. Particulars respecting Agricultural and Stock Departments.—A synopsis of the activities and operations of the Agricultural and Stock Departments of the several States on 30th June, 1920, will be found in Year Book No. 14, pages 1180 to 1191. The main features of organization are set out under their respective headings as regards staff, expenditure, work undertaken in agricultural colleges, technical schools, experimental farms, and orchards and vineyards. The subject of lectures and other forms of agricultural instruction by experts is dealt with, as well as such matters as the distribution of plants, and the special steps taken to disseminate information amongst agriculturists, and to facilitate the marketing of products.

CHAPTER XVIII.

FARMYARD, DAIRY, AND BEE PRODUCTS.

§ 1. Introductory.

1. **General.**—The introduction of cattle into Australia, and the early history of the dairying industry are referred to in some detail in earlier issues of this work (see Official Year Book No. 6, p. 430). It may here be noted that the original stock has been crossed with specially imported stud cattle, while further judicious crossing of strains has resulted in an increased and improved milk supply. In Australia, dairy cattle thrive in the open throughout the year, local climatic conditions demanding no protection other than tree plantations for shelter, and rugging in the coldest weather. Indigenous and imported grasses furnish food during the greater part of the year, and winter fodder, when necessary, is given to the cattle in the fields. With the adoption of scientific methods in the treatment of animals and pasturages and in the processes of manufacture, coupled with effective State supervision, the dairying industry has shown rapid expansion.

2. **Official Supervision of Industry.**—Dairy experts, under the supervision of the various State Agricultural Departments, give instruction in approved methods of production, and inspect animals, buildings, and marketable produce. A high standard of cleanliness, both of personnel and *matériel*, prevails. Financial assistance of a temporary nature is also given, advances made being generally repaid with promptitude.

The export trade is regulated by the terms of the Commonwealth Commerce Act 1905 and regulations thereunder. The provisions of this Act are set out in detail in Official Year Book No. 6, pp. 431–2. It will be sufficient to note here that the true trade description, &c., must be marked on all produce intended for export, while official inspection ensures the maintenance of purity and quality. Upon request of the exporter the goods are certificated by the inspector.

3. **Mixed Farming.**—Dairying is not now, as formerly, wholly confined to farmers, since many graziers in a large way of business have lately given it their attention. In non-coastal regions it is generally carried on in conjunction with agriculture and sheep-raising, sufficient fodder being grown to carry the cattle through the winter months. Local wants are thus met, and in many places remote from the metropolis well-equipped factories have been established.

4. **Factory System.**—Cream separation and butter-making are often carried on together under the co-operative system. The creation of large central butter factories, supplied by numerous separating establishments or "creameries," has resulted in a considerable reduction in the cost of manufacture, since improved appliances such as refrigerators may be profitably worked at the larger establishments. The product is also of a more uniform quality. The number of farmers who adhere to hand processes is rapidly diminishing. Formerly the average quantity of milk used per pound of hand-made butter was about 3 gallons, but separator butter requires only 2½ gallons.

5. Butter and Cheese Factories.—The factories in Australia for the manufacture of butter, cheese, and condensed milk numbered 579 in 1926-27. These were distributed in the various States as follows:—New South Wales, 167; Victoria, 182; Queensland, 125; South Australia, 58; Western Australia, 11; and Tasmania, 36.

§ 2. Dairy Cattle and Dairy Products.

1. Dairy Herds.—The dairy herds of Australia were severely depleted during the drought of 1914–15, when the number was reduced to 1,684,393. Following that year substantial increases have taken place, and the number recorded in 1926 represents a gain of nearly 600,000 in the past decade. In New South Wales, Victoria, South Australia, and Tasmania the proportion of diary cattle on all cattle is high. In Queensland, the Northern Territory, and Western Australia there is a greatly preponderating number of other cattle, dairying not being firmly established in the tropical regions of the Continent. In Southern Queensland, however, the industry has developed remarkably during the past decennium, and the progress attained in that area has been largely responsible for the Australian increases since 1916. The returns for 1926 include for the first time heifers intended for milking and being within three months of calving. Details were not collected for Victoria and Tasmania, but the total of such heifers in the other States amounted to 121,060.

CATTLE AND DAIRY CATTLE.—NUMBER, 1922 TO 1926.

State.		1922.	1923.	1924.	1925.	1926.
New South Wales ..	All Cattle ..	3,244,905	2,932,437	2,871,196	2,931,818	2,813,144
	Dairy Cows ..	796,957	784,824	834,557	840,930	885,238
Victoria ..	All Cattle ..	1,785,660	1,591,367	1,605,554	1,513,787	1,435,761
	Dairy Cows ..	794,898	738,149	760,207	727,940	673,089
Queensland ..	All Cattle ..	6,955,463	6,396,514	6,454,653	6,436,645	5,464,845
	Dairy Cows ..	563,683	512,529	584,886	551,426	611,227
South Australia ..	All Cattle ..	425,811	413,272	400,423	373,597	340,007
	Dairy Cows ..	135,450	136,438	135,619	127,670	127,292
Western Australia ..	All Cattle ..	939,596	953,764	891,564	835,911	827,303
	Dairy Cows ..	58,387	61,832	60,882	63,008	69,627
Tasmania ..	All Cattle ..	218,197	220,351	225,740	212,373	213,112
	Dairy Cows ..	69,991	70,497	70,073	70,382	67,457
Northern Territory ..	All Cattle ..	760,766	843,718	855,285	970,342	863,597
	Dairy Cows ..	(a)	(a)	(a)	(a)	(a)
Federal Capital Territory	All Cattle ..	6,275	6,085	5,058	5,312	5,509
	Dairy Cows ..	443	375	413	646	815
Australia ..	All Cattle ..	14,336,673	13,357,508	13,309,473	13,279,785	11,963,278
	Dairy Cows ..	2,419,809	2,304,644	2,444,637	2,382,002	2,434,745

(a) Not available.

2. Milk.—The annual quantity of milk produced per dairy cow varies greatly with breed, locality and season, reaching as high as 1,000 gallons, but averaging for the whole of Australia for all dairy cows and for all seasons prior to 1916 considerably under 300 gallons per annum. Of late years an improvement in the grade of dairy cattle has taken place, and the 300 gallon mark has been exceeded on each of the last three seasons, the yield of 363 gallons in 1924 constituting a record. The best yields over a series of years appear to be in Victoria, South Australia and New South Wales, while Queensland and Tasmania in normal years are above Western Australia. In the following table the annual average yields per cow for the last five years are based on the number of dairy cows which were in milk during any part of the year. The average given is considerably below that for cows which were yielding during the greater part of the year. The highest averages were, of course, obtained in those States which have most extensively adopted scientific methods of dairying, such as systematic breeding, culling of herds, milk testing, etc.

MILK PRODUCTION, 1922 TO 1926–27.

Heading.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Fed. Cap. Ter.	Australia. (*b*)
1922—								
Dairy Cows (*a*) .. No.	806,268	757,186	558,945	133,252	56,108	69,293	428	2,381,480
Production 1,000 gals.	226,864	249,322	134,032	42,054	11,932	21,000	106	685,310
Aver. per cow ..gals.	281	329	240	316	213	303	248	288
1923—								
Dairy Cows (*a*) .. No.	790,890	766,524	538,106	135,944	60,110	70,244	409	2,362,227
Production 1,000 gals.	225,395	260,953	104,204	47,621	13,048	21,200	111	672,532
Aver. per cow ..gals.	285	340	194	350	217	302	271	285
1924—								
Dairy Cows (*a*) .. No.	809,691	749,178	548,707	135,029	61,357	70,285	394	2,374,641
Production 1,000 gals.	316,810	294,765	170,074	45,426	13,363	21,840	116	862,394
Aver. per cow ..gals.	391	393	310	336	218	311	294	363
1925–26—(*c*)								
Dairy Cows (*a*) .. No.	837,744	744,074	568,156	130,644	61,945	70,227	530	2,413,320
Production 1,000 gals.	289,861	255,120	153,386	41,386	14,823	18,684	199	773,459
Aver. per cow ..gals.	346	343	270	317	239	266	375	320
1926–27 (*c*)								
Dairy Cows (*a*) .. No.	837,373	700,515	553,472	123,066	63,768	68,920	730	2,347,844
Production 1,000 gals.	277,917	258,437	136,416	40,434	15,553	21,009	198	749,964
Aver. per cow .. gals.	332	369	246	329	244	305	271	319

(*a*) Mean for the year. (*b*) Exclusive of Northern Territory. (*c*) Year ended 30th June.

3. **Butter and Cheese.**—Although the quantity of dairy production is largely affected by the nature of the seasons, an important advance in the output of butter has taken place in the past decade. During that period the average annual production increased from 180,000,000 lb. for the quinquennium 1912–1916, to 260,000,000 lb. for the latest five years under review. Victoria was responsible for the largest share of the increased butter output in Australia, being pressed closely by Queensland, where marked development has taken place during recent years, while an important contribution to the general progress was also made by New South Wales. The maximum output of butter in Australia was recorded in 1924, when, as the result of a specially favourable season, 313,952,291 lb. were manufactured.

The manufacture of cheese is also largely dependent upon seasonal conditions. The average for the last decennium is, however, much greater than that for the previous one. The production in 1921 of 32,653,003 lb. is the highest yet recorded, followed very closely by the 31,442,292 lb. returned for 1924. Owing to less favourable conditions, the production in 1926–27 fell to 26,679,197 lb.

The development in dairy production since 1896, and in the exports of butter from 1901 onwards are shown in the graphs on page 658. Particulars for the past five years are as follows :—

BUTTER AND CHEESE PRODUCTION, 1922 TO 1926–27.

State.	1922.	1923.	1924.	1925–26.	1926–27.
BUTTER.					
	lb.	lb.	lb.	lb.	lb.
New South Wales	*a*73,705,349	*a*72,666,613	*a*117,195,871	106,953,339	95,832,624
Victoria	*a*84,355,940	*a*86,888,725	*a*100,849,382	81,747,291	81,995,815
Queensland	53,785,599	40,659,634	*a*70,406,492	63,001,073	51,402,633
South Australia	*a*14,646,632	*a*17,244,389	*a*16,066,694	13,882,850	13,416,904
Western Australia	2,766,533	3,005,491	2,962,630	2,591,818	3,829,728
Tasmania	5,716,708	*a*6,183,521	*a*6,455,746	5,122,992	6,032,597
Federal Capital Territory ..	18,248	17,480	15,476	14,322	20,758
Australia	**234,995,009**	**226,665,853**	**313,952,291**	**273,313,685**	**252,531,059**
CHEESE.					
	lb.	lb.	lb.	lb.	lb.
New South Wales	*a*5,198,905	*a*5,912,656	*a*7,705,596	6,462,535	6,735,960
Victoria	*a*3,754,960	*a*7,216,936	*a*6,193,135	5,279,009	5,997,648
Queensland	10,560,316	7,221,355	*a*12,643,863	12,580,942	9,260,043
South Australia	*a*3,261,565	*a*3,679,552	*a*3,743,628	3,636,278	3,708,730
Western Australia	212	4,365	4,055	3,818	5,172
Tasmania	934,601	*a*1,345,661	*a*1,152,015	836,738	971,644
Australia	23,710,559	25,380,525	31,442,292	28,799,320	26,679,197

(*a*) For year ended 30th June of year following.

4. Concentrated Milk.—" Condensed " or " concentrated " milk represents milk the bulk of which is reduced by evaporation. The industry is of comparatively recent growth, the quantity of milk treated in 1901 being negligible, but production increased annually until in 1911 the output nearly doubled that of the previous year. Thenceforward rapid progress was made, the greatest development taking place in Victoria, where the industry is most largely established. There is still an import of milk, but the exports in each year far outweigh the quantity imported. No condensed or concentrated milk is made in South Australia, Western Australia, or Tasmania. In New South Wales, Victoria, and Queensland the returns for the last five years were as follows :—

CONDENSED, CONCENTRATED, OR POWDERED MILK MADE, 1922 TO 1926-27.

Year.	N.S.W.	Victoria.	Queensland.	Australia.
	lb.	lb.	lb.	lb.
1922	*a*3,544,565	*a*38,314,260	9,601,914	51,460,739
1923	*a*7,158,537	*a*49,099,632	8,131,648	64,389,817
1924–25	5,804,191	45,693,120	10,511,919	62,009,230
1925–26	5,745,454	43,646,852	8,831,623	58.223,929
1926–27	*b*	48,186,040	*b*	*c*59,180,891

(*a*) For year ended 30th June of year following. (*b*) Not available for publication.
(*c*) Including New South Wales and Queensland.

5. Oversea Trade in Butter, Cheese, and Milk.—The following tables give the imports, exports, and net exports of butter, cheese, and milk. In each of the five years dealt with the exports of butter, cheese, and condensed milk exceeded the imports.

BUTTER, CHEESE, AND MILK, IMPORTS AND EXPORTS.—AUSTRALIA, 1922-23 TO 1926-27.

Products.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
			IMPORTS.		
Butter .. .. .. lb.	2,955,934	2,368,102	19,717	2,991,243	7,160,864
" .. .. .. £	237,149	191,828	1,340	246,703	519,672
Cheese .. .. .. lb.	499,125	1,422,148	356,717	1,487,023	1,789.766
" .. .. .. £	27,345	71,379	37,448	111,827	133,600
Milk—concentrated and preserved(*a*) lb.	417,054	373,866	367,073	348,178	647,122
" " " " £	28,371	26,652	32,359	20,398	34,115
			EXPORTS.		
Butter .. .. .. lb.	79,571,151	65,984,020	145,281,326	97,899,824	76,767,844
" .. .. .. £	6,133,864	4,919,664	10,006,081	7,006,830	5,465,347
Cheese .. .. .. lb.	5,454,466	3,831,269	10,397,392	6,884,347	3,663,175
" .. .. .. £	231,907	142,820	365,764	271,973	133.266
Milk—concentrated and preserved(*a*) lb.	21,234,027	17,765,480	29,172.996	25,908,328	17,759,929
" " " " £	1,328,762	1,080,088	1,694,634	1,476,422	1,081,256
			NET EXPORTS.(*b*)		
Butter .. .. .. lb.	76,615,217	63,615,918	145,261,609	94,908,581	69,606,980
" .. .. .. £	5 896,715	4,727,836	10,004,741	6,760,127	4,945,675
Cheese .. .. .. lb.	4,955,341	2,409,121	10,040,675	5,397,324	1,873,409
" .. .. .. £	204,562	71,441	328,316	160,146	– 334
Milk—concentrated and preserved(*a*) lb.	20,816,973	17,391,614	28,805,923	25,560,150	17,112.807
" " " " £	1,300,391	1,053,436	1,662,275	1,456,024	1,047,141

NOTE.—The minus sign (–) indicates net imports.

(*a*) See definition above. (*b*) Excess of exports over imports.

6. **Local Consumption of Butter and Cheese.**—The total production of butter and cheese, with the subtraction or addition of the net export or import for the corresponding period gives approximately the quantity available for consumption in Australia. The figures for the past five years are as follows :—

BUTTER AND CHEESE.—LOCAL CONSUMPTION, 1922 TO 1926–27.

Products.	1922.	1923.	1924.	1925–26.	1926–27.
	lb.	lb.	lb.	lb.	lb.
Butter .. Total	158,379,792	163,049,935	168,690,682	178,405,104	182,924,079
,, .. Per head of population ..	28.12	28.36	28.72	29.77	29.94
Cheese .. Total	18,755,218	22,971,404	21,401,617	23,401,996	24,805,788
,, .. Per head of population ..	3.33	4.00	3.64	3.91	4.06

The quantity available for consumption in 1926–27 averaged 30 lb. of butter and 4 lb. of cheese, or a total of 34 lb. per head of population, an amount probably unsurpassed anywhere. The consumption of butter and cheese in the United Kingdom in normal times is given as about 22½ lb. per head per annum.

§ 3. Pigs and Pig Products.

1. **Pigs.**—The number of pigs in Australia from 1922 to 1926 is shown below :—

PIGS.—NUMBER, 1922 TO 1926.

State.	1922.	1923.	1924.	1925.	1926.
New South Wales (*a*) ..	340,579	322,762	339,378	382,331	332,827
Victoria	294,962	259,795	288,509	339,601	284,271
Queensland	160,617	132,243	156,163	199,598	183,662
South Australia	(*a*) 75,520	(*a*) 73,414	80,988	90,794	79,108
Western Australia ..	67,561	61,478	66,375	74,316	69,798
Tasmania	46,056	47,101	47,305	41,009	38,906
Northern Territory ..	361	647	1,000	382	343
Federal Cap. Territory (*a*)	274	434	291	343	94
Australia	985,930	897,874	980,009	1,128,374	989,009

(*a*) As on 30th June of year following.

For many years the number of pigs in Australia has fluctuated considerably. There was a heavy falling off in 1915, followed by substantial increases during the next two years, the number in 1917, viz., 1,169,365, being the highest recorded in Australia. From 1917 onwards the numbers declined for a time, but during the past five years they have remained fairly constant at about one million. The number of pigs per head of population, and the number per square mile, will be found in the tables of live stock, page 636.

2. **Bacon and Ham.**—(i) *Production.* The production of bacon and ham is increasing fairly rapidly, the averages for the past three quinquennia being 51,000,000, 60,000,000, and 69,000,000 lb. respectively. No increase in the volume of exports has taken place, the extra production being needed to supply the local demand, which is expanding with the population and the increasing consumption per head.

BACON AND HAM.—PRODUCTION, 1922 TO 1926–27.

State.	1922.	1923.	1924.	1925–26.	1926–27.
	lb.	lb.	lb.	lb.	lb.
New South Wales ..	*a*19,234,681	*a*19,044,294	*a*21,068,976	22,949,531	24,600,275
Victoria ..	*a*19,269,125	*a*22,540,973	*a*21,993,869	21,213,925	20,952,310
Queensland ..	15,130,545	16,219,969	*a*15,640,561	18,326,728	18,288,690
South Australia ..	*a*5,002,199	*a*5,095,970	*a*5,374,457	5,600,760	5,165,670
Western Australia (*b*)	2,050,220	2,420,585	2,797,151	2,960,139	2,678,830
Tasmania	1,778,015	*a*2,271,141	*a*2,428,966	2,314,756	1,946,323
Federal Cap. Territory	*a*11,185	*a*7,815	*a*7,820	8,840	2,790
Total ..	62,475,970	67,600,747	69,311,800	73,374,679	73,634,888

(*a*) For year ended 30th June of year following. (*b*) A portion only from pigs slaughtered in the State; balance imported and subsequently cured.

(ii) *Local Consumption.* From about 1904 onwards the production of bacon and ham has been sufficient to meet the local demand, and provide a small surplus for export. The total home consumption and the average per head of population for the last five years are given hereunder :—

BACON AND HAM.—LOCAL CONSUMPTION, 1922 TO 1926-27.

Particulars.	1922.	1923.	1924.	1925–26.	1926–27.
	lb.	lb.	lb.	lb.	lb.
Total	60,753,826	66,372,107	67,969,350	72,205,137	72,175,870
Per head of population ..	10.78	11.54	11.57	12.05	11.81

3. Oversea Trade in Pig Products.—The oversea trade in pigs and pig products for the last five years is shown in the following table :—

PIG PRODUCTS.—AUSTRALIAN TRADE, 1922–23 TO 1926–27.

Particulars.		1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
			PIGS.			
Imports	No.	31	13	10	6	8
,, ...	£	596	376	150	250	223
Exports	No.	67	38	65	320	418
,, ...	£	510	288	676	1,951	2,506
Net Exports ..	No.	36	25	55	314	410
,, ..	£	−86	−88	526	1,701	2,283
			BACON AND HAM.			
Imports	lb.	149,270	320,030	322,106	509,101	374,814
,, ...	£	8,414	19,005	18,492	33,773	23,101
Exports	lb.	1,871,414	1,548,670	1,664,556	1,678,643	1,833,832
,, ...	£	158,414	132,581	124,891	139,864	147,886
Net Exports ..	lb.	1,722,144	1,228,640	1,342,450	1,169,542	1,459,018
,, ..	£	150,000	113,576	106,399	106,091	124,785

NOTE.—The minus sign (−) signifies net imports.

PIG PRODUCTS.—AUSTRALIAN TRADE, 1922–23 TO 1926–27—*continued.*

Particulars.		1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
			LARD.			
Imports	lb.	505,827	574,733	112,084	244,517	575,293
,, ...	£	12,905	17,181	4,080	8,787	17,169
Exports	lb.	1,358,291	651,530	1,523,530	1,953,796	1,334,421
,, ...	£	38,491	24,027	42,744	56,630	38,839
Net Exports ..	lb.	852,464	76,797	1,411,446	1,709,279	759,128
,, ..	£	25,586	6,846	38,664	47,843	21,670
			FROZEN PORK.			
Imports	lb.	370,094	1,679,278	962,639	466,425	733,179
,, ...	£	14,486	63,908	35,695	20,066	31,657
Exports	lb.	144,796	53,142	61,393	90,106	481,330
,, ...	£	6,282	2,099	2,749	3,647	16,608
Net Exports ..	lb.	−225,298	−1,626,136	−901,246	−376,319	−251,849
,, ..	£	−8,204	−61,809	−32,946	− 16,419	−15,049

NOTE.—The minus sign (−) signifies net imports.

The output of pig products in Australia is usually sufficient to meet local requirements, and provide a small surplus for export. During the last five years the value of the average annual net export amounted to £122,274, the bulk of the shipments consisting of bacon, ham and lard.

§ 4. Total Dairy Production.

The total dairy production of Australia in 1926–27 is shown below :—

TOTAL DAIRY PRODUCTION.—AUSTRALIA, 1926–27.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Fed. Cap. Ter.	Total.
				MILK.				
Used for—	gallons.	gallons.	gallons.	gallons.	gallons.	gallons.	gallons.	gallons.
Butter ..	213,772,701	186,981,320	109,722,923	28,562,815	a8,297,435	14,110,369	60,871	561,508,434
Cheese ..	6,861,603	5,957,300	14,494,869	3,627,364	(b)	964,814	..	52,898,152
Condensing and concentrating ..	2,900,812	18,091,390		..	..	..	..	
Other purposes ..	54,382,327	47,406,650	12,198,661	8,243,373	7,255,230	5,933,817	137,686	135,557,684
Total ..	277,917,443	258,436,660	136,416,393	40,433,552	15,552,665	21,009,000	198,557	749,964,270
				BUTTER.				
	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
In Factories	91,028,869	78,108,491	49,054,847	9,857,791	2,464,352	4,268,936	..	234,783,286
On Dairy and other Farms ..	4,803,755	3,887,324	2,347,786	3,559,113	1,365,376	1,763,661	20,758	17,747,773
Total ..	95,832,624	81,995,815	51,402,633	13,416,904	3,829,728	6,032,597	20,758	252,531,059

(*a*) Including milk used for making cheese. (*b*) Not available for publication.

TOTAL DAIRY PRODUCTION.—AUSTRALIA, 1926-27—*continued.*

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Fed. Cap. Ter.	Total.
CHEESE.								
	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
In Factories	6,628,000	5,481,585	9,243,279	3,708,730	(*b*)	739,812	..	25,801,406
On Dairy and other Farms ..	107,960	516,063	16,764	..	5,172	231,832	..	877,791
Total ..	6,735,960	5,997,648	9,260,043	3,708,730	5,172	971,644	..	26,679,197
CONDENSED, CONCENTRATED, OR POWDERED MILK.								
	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
In Factories	(*b*)	48,186,040	(*b*)	..	..	..	..	*c* 59,180,891
BACON AND HAM.								
	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
In Factories	23,275,890	19,739,524	17,971,692	4,608,542	*a*2,514,651	1,271,810	..	69,382,109
On Dairy and other Farms ..	1,324,385	1,212,786	316,998	557,128	164,179	674,513	2,790	4,252,779
Total ..	24,600,275	20,952,310	18,288,690	5,165,670	2,678,830	1,946,323	2,790	73,634,888

(*a*) A portion only from pigs slaughtered in the State, the balance being imported and subsequently cured. (*b*) Figures not available for publication. (*c*) Including New South Wales and Queensland.

Particulars in regard to the production of other milk products are not available for all the States, but the following articles were made in Victoria during 1926–27 :—Casein, 1,803,049 lb. ; and milk sugar, 350,570 lb.

§ 5. Poultry Farming.

1. **General.**—Poultry stocks are largely maintained by farmers, and production therefrom furnishes a considerable addition to the annual agricultural or dairying returns. During recent years, however, poultry-keeping has assumed an independent position among rural industries, while it is also carried on in conjunction with pig-farming. Special poultry farms have been instituted for scientific breeding, poultry experts give lectures and instruction, and egg-laying competitions are conducted. Poultry for consumption is extensively reared, and the egg-producing qualities of the birds have been greatly improved by careful breeding. Co-operative egg-collecting circles have been formed in some districts; eggs are also delivered with the milk and cream to the local butter factories, and thence forwarded to market.

2. **Poultry Products.**—There is some difficulty in obtaining complete figures for the yield of poultry products. The following values relate to poultry and eggs :—

POULTRY AND EGGS.—VALUE OF PRODUCTION, 1922–23 TO 1926–27.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania. (*a*)	Australia.
	£	£	£	£	£	£	£
1922–23 ..	2,894,000	4,315,810	417,052	1,066,137	240,423	300,000	9,233,422
1923–24 ..	2,443,160	4,587,560	364,681	1,088,105	252,527	300,000	9,036,033
1924–25 ..	2,727,000	4,326,295	530,782	1,148,322	286,350	300,000	9.318,749
1925–26 ..	3.446,000	4,515,400	621,876	1,094.205	305.888	300,000	10.283.369
1926–27 ..	3,807,500	4,819,500	500,237	1,046,056	330,903	300,000	10,804,196

(*a*) Estimated.

3. Oversea Trade in Poultry Products.—The Australian oversea trade in poultry products is confined to eggs, which are mainly consigned from New South Wales to the United Kingdom. Other States are participating in this trade to an increasing extent, the value of the shipments dispatched in 1926–27 amounting to nearly one quarter of a million sterling. The exports of frozen poultry expanded during the three years ended 1922–23, but since that year the shipments have not been maintained. The oversea trade during the past five years was as follows:—

POULTRY PRODUCTS, TRADE.—AUSTRALIA, 1922–23 TO 1926–27.

Particulars.		1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
LIVE POULTRY.						
Imports	No.	791	881	459	384	281
,, ...	£	1,534	3,981	1,084	1,475	1,604
Exports	No.	2,872	2,234	2,057	3,418	1,847
,, ...	£	2,682	1,707	1,527	2,311	1,311
Net Exports ..	No.	2,081	1,353	1,598	3,034	1,566
,, ..	£	1,148	–2,274	443	836	–293
FROZEN POULTRY.						
Imports	lb.	4,784	5,438	11,591	12,367	12,340
,, ...	£	228	269	752	741	749
Exports	pair	34,399	10,882	10,898	22,381	19,880
,, ...	£	42,951	11,270	14,141	25,242	30,259
Net Exports ..		(a)	(a)	(a)	(a)	(a)
,, ..	£	42,723	11,001	13,389	24,501	29,510
EGGS.						
Imports	doz.	26,750	28,123	30,051	29,652	24,182
,, ...	£	1,591	1,707	1,796	2,003	1,507
Exports	doz.	1,236,033	655,620	692,015	1,531,744	3,151,990
,, ...	£	102,946	52,743	53,538	116,681	233,672
Net Exports ..	doz.	1,209,283	627,497	661,964	1,502,092	3,127,808
,, ..	£	101,355	51,036	51,742	114,678	232,165
EGG-CONTENTS.						
Imports	lb.	33,672	34,418	32,105	21,495	39,675
,, ...	£	5,250	7,845	7,190	4,313	6,382
Exports	lb.	(a)	(a)	(a)	(a)	(a)
,, ...	£	38	212	144	95	97
Net Exports ..	lb.	(a)	(a)	(a)	(a)	(a)
,, ..	£	–5,212	–7,633	–7,046	–4,218	–6,285

NOTE.—The minus – signifies net imports. (a) Quantity not available.

§ 6. Bee Farming.

1. General.—As in the case with poultry-farming, bee-farming is frequently carried on in connexion with agriculture or dairying. The returns of honey from productive hives during 1926–27 gave an average of 61 lb. per hive, while the average quantity of wax was 0.83 lb. per hive.

2. **Production of Honey and Beeswax.**—The number of hives and the production of honey and beeswax during the year 1926–27 are given in the following table :—

BEE-HIVES, HONEY, AND BEESWAX, 1926–27.

State.	Bee Hives.			Honey Produced.		Beeswax Produced.	
	Productive.	Unproductive.	Total.	Quantity.	Value.	Quantity.	Value.
	No.	No.	No.	lb.	£	lb.	£
New South Wales ..	31,203	7,724	38,927	1,510,420	27,680	22,532	1,891
Victoria	32,551	21,572	54,123	2,370,310	49,379	33,238	2,908
Queensland ..	11,263	4,789	16,052	461,009	7,851	8,785	579
South Australia ..	24,176	4,483	28,659	1,918,195	21,979	22,368	1,375
Western Australia ..	9,708	2,208	11,916	553,238	9,469	5,190	370
Tasmania	3,588	2,053	5,641	75,876	1,880	1,224	40
Fed. Cap. Territory..	107	8	115	12,120	220	104	9
Australia ..	112,596	42,837	155,433	6,901,168	118,458	93,441	7,172

The table hereunder gives the production of honey and beeswax for the latest available five years :—

HONEY AND BEESWAX PRODUCTION, 1922-23 TO 1926-27.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Fed. Cap. Ter.	Australia.
				HONEY.				
	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
1922–23	1,235,905	2,285,000	580,057	1,863,026	330,869	71,030	3,175	6,369,062
1923–24	590,800	2,110,713	505,346	721,640	395,047	133,330	180	4,457,056
1924–25	3,088,550	4,054,975	691,136	2,764,389	378,889	95,476	1,600	11,075,015
1925–26	2,234,495	2,114,807	801,587	1,360,916	311,492	116,392	600	6,940,289
1926–27	1,510,420	2,370,310	461,009	1,918,195	553,238	75.876	12,120	6,901,168
				BEESWAX.				
	lb.	lb.	lb.	lb.	lb.	lb.	lb.	lb.
1922–23	28,244	27,182	8,895	19,111	5,391	1,473	198	90,494
1923–24	12,701	25,371	7,405	11,216	5,637	1,596	2	63,928
1924–25	40,043	47,117	9,883	27,837	6,844	1,666	65	133,455
1925–26	38,171	28,812	11,888	11,772	3,737	1,566	100	96,046
1926–27	22,532	33,238	8,785	22,368	5,190	1,224	104	93,441

The quantity of honey and beeswax produced naturally varies from year to year according to the condition of the seasons. During the last five years New South Wales has produced 8,660,170 lb. of honey and 141,691 lb. of beeswax, while the Victorian figures amounted to 12,935,805 lb. and 161,720 lb. respectively for honey and beeswax. These two States together accounted for 56.23 per cent. of the total production of honey and 59.68 per cent. of the beeswax. Next in order of importance were South Australia, Queensland, and Western Australia.

3. Oversea Trade in Bee Products.—In normal years the local production of honey exceeds Australian requirements, and a small quantity is available for export. During the past five years the value of the exports amounted to only £21,498, or an annual average of £4,300, owing to the decrease in production. The more general use of frame hives has affected the production of wax, and as a result the quantity imported has exceeded that exported during each of the past five years.

BEE PRODUCTS.—IMPORTS, EXPORTS, ETC., AUSTRALIA, 1922–23 TO 1926–27.

Particulars.		1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
HONEY.						
Imports	lb.	811	772	1,008	4,684	657
,, ...	£	24	22	33	211	20
Exports	lb.	57,638	41,584	137,116	113,401	402,745
,, ...	£	2,718	2,060	3,807	3,756	9,157
Net Exports ..	lb.	56,827	40,812	136,108	108,717	402,088
,, ..	£	2,694	2,038	3,774	3,545	9,137
BEESWAX.						
Imports	lb.	238,368	76,478	109,816	22,937	75,104
,, ...	£	13,817	4,759	8,288	2,195	6,951
Exports	lb.	671	2,046	1,956	1,577	326
,, ...	£	61	149	187	131	29
Net Exports ..	lb.	−237,697	−74,432	−107,860	−21,360	− 74,778
,, ..	£	− 13,756	− 4,610	− 8,101	−2,064	− 6,922

NOTE.—The minus sign (−) signifies net imports.

§ 7. Value of Farmyard, Dairy, and Bee Products.

The value of the farmyard, dairy and bee products raised in Australia in 1926–27 was as follows :—

FARMYARD, DAIRY, AND BEE PRODUCTS.—VALUE, 1926–27.

Products.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Fed. Cap. Ter.	Australia.
	£	£	£	£	£	£	£	£	£
Milk, consumed as such ..	3,096,771	2,699,545	694,643	469,414	413,145	337,898	..	7,840	7,719,256
Butter ..	7,465,966	6,233,484	4,176,462	1,069,461	298,848	446,808	..	1,617	19,692,646
Cheese ..	294,481	270,695	405,121	137,861	6,113	37,385	..	..	1,151,656
Condensed and concentrated milk	b1,576,110	c1,498,055	942,604	..	..	..	..	..	5,856,289
Bacon and ham		1,242,285		327,897	166,977	102,217	..	144	
Pork	498,868	458,012	192,994	159,572	158,541	58,905	819	1,837	1,529,548
Lard	24,333	30,827	28,035	8,199	4,295	5,049	..	..	100,738
Poultry and eggs	3,807,500	4,819,500	500,237	1,046,056	330,903	300,000	..	(a)	10,804,196
Honey and wax	29,571	52,287	8,430	23,354	9,839	1,920	..	229	125,630
Total ..	16,793,600	17,304,690	6,948,526	3,241,814	1,388,661	1,290,182	819	11,667	46,979,959

(a) Included with New South Wales. (b) Includes other Milk Products made. (c) Includes casein £43,715, and milk sugar £13,903.

§ 8. Exports of Australian Farmyard, Dairy, and Bee Products.

The quantities and values of Australian farmyard, dairy, and bee products exported during each of the last five years are shown below :—

AUSTRALIAN FARMYARD, DAIRY AND BEE PRODUCTS.—EXPORTS, 1922–23 TO 1926–27.

Particulars.		1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
		QUANTITY.				
Beeswax	lb.	581	1,902	782	1,577	326
Butter	,,	78,975,387	65,440,852	145 281,326	97,899,824	76,516,497
Cheese	,,	5,454,415	3,787,714	10,353,950	6,872,761	3,643,832
Egg albumen and yolk	,,	(a)	(a)	(a)	(a)	(a)
Eggs	doz.	1,236,033	655,215	691,740	1,531,744	3,151,965
Feathers, undressed	..	(a)	(a)	(a)	(a)	(a)
Honey	lb.	57,638	41,584	137,116	113,401	402,745
Lard	,,	1,357,372	645,930	1,523,530	1,953,796	1,315,831
Meats—						
Bacon and Ham	,,	1,871,414	1,548,670	1,664,556	1,678,643	1,833,468
Frozen Poultry	pair	34,399	10,882	10,898	22,381	19,980
Frozen Pork	lb.	137,946	53,142	61,393	38,058	481,330
Milk, concentrated and preserved	,,	21,135,137	17,762,106	29,165,694	23,626,795	17,752,506
Pigs, living	No.	67	38	65	320	418
Poultry, living	,,	2,858	2,174	2,057	3,418	1,833
		VALUE.				
		£	£	£	£	£
Beeswax	..	51	137	69	131	29
Butter	..	6,082,414	4,874,921	10,006,081	7,006,830	5,447,224
Cheese	..	231,898	140,715	363,757	270,712	131,168
Egg albumen and yolk	..	32	210	..	95	56
Eggs	..	102,946	52,715	53,518	116,681	233,670
Feathers, undressed	..	1,247	303	1,112	1,089	774
Honey	..	2,718	2,060	3,807	3,756	9,157
Lard	..	38,447	23,809	42,744	56,630	37,995
Meats—						
Bacon and Ham	..	158,414	132,581	124,891	139,864	147,861
Frozen Poultry	..	42,951	11,270	14,141	25,242	30,259
Frozen pork	..	6,063	2,099	2,749	3,579	16,608
Milk, concentrated and preserved	..	1,325,883	1,079,943	1,694,230	1,261,417	1,080,963
Pigs, living	..	510	288	676	1,951	2,506
Poultry, living	..	2,640	1,649	1,527	2,311	1,281
Total	..	7,996,214	6,322,700	12,309,302	8,890,288	7,139,551

(a) Quantity not available.

§ 9. British Imports of Dairy Products.

1. **Quantities and Values.**—The following table gives the quantities and values of the principal dairy products imported into the United Kingdom during the years 1922 to 1926 :—

DAIRY PRODUCTS.—IMPORTS, UNITED KINGDOM, 1922 TO 1926.

Products.		1922.	1923.	1924.	1925.	1926.
Butter	cwt.	4,268,561	5,095,511	5,287,244	5,853,243	5,818,840
,,	£	37,315,536	44,234,534	49,647,492	53,204,417	48,283,312
Cheese	cwt.	2,659,345	2,838,546	2,887,413	3,098,702	3,014,055
,,	£	12,437,818	15,260,707	13,552,406	15,696,806	13,940,648
Milk, concentrated and preserved	cwt.	2,059,050	2,366,532	2,333,701	2,413,350	2,556,890
,, ,, ,, ,,	£	6,588,155	6,716,648	6,183,530	5,756,372	5,420,167
Bacon and ham	cwt.	7,365,394	9,540,241	9,509,399	9,002,912	8,666,467
,, ,,	£	44,115,900	46,536,807	45,050,619	50,774,719	50,146,958
Pork (a)	cwt.	292,358	475,963	238,206	262,998	303,234
,,	£	1,102,304	1,898,233	952,057	1,133,648	1,396,714

(a) Frozen, chilled, and salted.

2. **Butter.**—(i) *Imports.* Australia has for many years supplied a large proportion of the butter imported into the United Kingdom. The quantity shipped in 1926 amounted to 752,088 cwt., or nearly 13 per cent. of the total importation. The Australian contribution was valued at £5,759,695, and was exceeded only by that shipped from Denmark and New Zealand.

BUTTER IMPORTS.—UNITED KINGDOM, 1926.

Country from which Imported.	Quantity.	Value.
	Cwt.	£
Denmark ..	1,906,495	17,166,480
New Zealand ..	1,153,896	9,607,459
Australia ..	**752,088**	**5,759,695**
Argentine Republic	514,197	3,862,998
Irish Free State ..	496,245	3,835,067
Soviet Republics	262,291	1,924,185
Finland ..	186,591	1,556,870
Sweden ..	154,072	1,327,190
Netherlands ..	150,442	1,330,281
Canada	63,609	502,811
Latvia	60,211	474,131
Estonia ..	58,681	466,940
France	29,971	239,149
Poland (including Dantzig) ..	14,094	108,009
United States of America ..	4,654	36,350
Norway ..	2,552	24,429
Union of South Africa ..	514	4,638
British Possessions, n.e.i. ..	1,223	6,700
Foreign Countries, n.e.i. ..	7,014	49,930
Total ..	5,818,840	48,283,312

(ii) *London Prices.* The average price of the best quality Australian butter in London during the past ten years is shown in the following table :—

AUSTRALIAN BUTTER.—LONDON PRICES, 1916 TO 1927.

Year.	Average Top Price per cwt. s.	d.
1916	169	6
1917	(*a*) 206	0
1918	(*b*) 252	0
1919	(*b*) 252	0
1920	(*b*) 299	9
1921	234	0
1922	183	0
1923	184	6
1924	189	6
1925	184	0
1926	169	6
1927	169	6

(*a*) Proclaimed price. (*b*) Flat rate for all imported butter.

Under contract the British Government purchased the surplus output of Australian butter during the period from 1st July, 1918, to 31st July, 1920. The price paid was 175s. per cwt. for butter scoring 90 points, a shilling per cwt. being added or deducted as the grading score exceeded or fell below that standard. On the 1st August, 1920, the contract was extended for a further period, the price of butter having been increased to 240s. per cwt., subsequently raised to 272s., and the grading price being likewise increased to 1s. 6d. per cwt. This contract terminated on the 31st March, 1921, butter thenceforward being sold in open market.

3. **Cheese.**—The value of cheese imported into the United Kingdom in 1926 was £13,940,648, of which £7,053,025 was received from New Zealand, and £4,657,201 from Canada. Small experimental shipments from Australia were made in 1908 and following years, fair prices being realized. The value of the imports from Australia during 1926 amounted to £224,290.

4. **Bacon and Ham.**—Of a total import of bacon and ham valued in 1926 at £50,146,958, the United Kingdom received imports to the value of £21,692,157 from Denmark, £12,545,647 from the United States, and £6,057,983 from Canada. The import from Australia was small, experimental shipments only having been made during recent years.

5. **Pork.**—The value of the United Kingdom imports of pork (frozen and salted only) was £1,396,714 in 1926. There was only a small importation from Australia, the bulk of the supplies being forwarded from the United States, New Zealand, Canada, China, Argentine Republic and Denmark.

6. **Other Products.**—There was practically no shipment to the United Kingdom from Australia of beeswax, poultry, game, lard, or honey, but frozen rabbits to the value of £438,063, and eggs to the value of £312,912 were received from Australia in 1926.

CHAPTER XIX.

FORESTRY.*

§ 1. Forestry.

1. **General.**—Economic forestry aims at the preservation and development of existing forest areas by safeguarding against fire and other destructive agencies, by expert supervision of the removal of timber, by judicious thinning, and by reforestation of denuded areas with suitable new growths of local or exotic origin. It provides also for the continuance of an indispensable form of national wealth by the afforestation of available bare lands adapted to the growth of various timbers. Though large areas of virgin forests still remain in Australia, the inroads made by timber-getters, by agriculturists, and by pastoralists—who have destroyed large areas by "ring-barking"—are considerable, and it is not unlikely that climatological changes are caused thereby. It is stated that beneficial consequences follow on the planting of trees on denuded lands, or along eroding coasts, and that a forest-covering beneficially regulates the effects of rainfall.

Successful planting of exotics in various parts of Australia has demonstrated that the climate is suitable for the cultivation of a large number of the most valuable and beautiful of the world's timber trees.

2. **Extent of Forests.**—(i) *Australia.* The wooded area of Australia contains a large number of xerophilous trees and woody shrubs which thrive in regions receiving less than 10 inches of rain per annum. Country devoid of tree growth is rare, the conditions being due to lack of suitable soil rather than lack of rainfall. Sand dunes, rock exposures, and clay pans are the most common treeless areas. A treeless region such as the 300 miles long Nullarbor plain is quite exceptional. There the lack of tree growth is due to the failure of the limestone formation to retain moisture. While, however, the major portion of Australia carries trees, and may be said to be well wooded (the term "desert" applying to relatively small areas only), dense forest is confined to a very narrow fringe. The savannah forests of the interior yield minor products such as sandalwood and tanbarks, but do not produce timber. These open, park-like formations carry only scattered trees of low habit. The bulk of the commercial forest products comes from the thickly-timbered areas comprised in the 30-inch and over rainfall belt south of the Tropics, and the 70-inch and over rainfall belt in the Tropics. The total area is comparatively small, and is confined to the following districts :—(*a*) The coastal belt in the extreme south-west of Western Australia, from a little north of Perth to Albany ; (*b*) the Otway country, in the south of Victoria, and the whole of the south-eastern portion of that State ; (*c*) the mountain forests of Victoria and New South Wales. A forest fringe extends along the coast of New South Wales and Queensland, the rainfall rising from 30 inches in the south and temperate portion to 140 inches in the Tropics. The greater portion of Tasmania receives sufficient rainfall to carry high forest, but a very small area only in South Australia, and practically none in the Northern Territory, are endowed with the necessary rainfall. Edaphic forests occur here and there, and the most important belt is probably that which is to be found on each side of the Murray River in New South Wales and Victoria. Red Gum (*E. rostrata*) is the riverine species. Practically the whole of Papua and New Guinea carry or have carried dense forests, the exceptions being certain small dry belts where the rainfall is less than 70 inches. Norfolk Island was, at one time, covered with a thick jungle.

Special articles relating to Australian Eucalyptus timbers and the chemical products of Eucalypts will be found in Official Year Book No. 10, pp. 85–98.

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* A specially contributed article dealing with Forestry in Australia appeared as part of this chapter in Official Year Book No. 19 (*vide* pp. 701 to 712 therein).

Scientific surveys of the forests of the various States have not yet been completed, and there are, in consequence, conflicting reports regarding the total forest area of Australia. Expert foresters, however, estimate the forest area possible for permanent reservation at approximately 24,500,000 acres, distributed throughout the States as follows :—

ESTIMATED FOREST AREA—AUSTRALIA.

State.	Total Forest Area.	Percentage on Total Area.
	Acres.	%
New South Wales	8,000,000	4.04
Victoria	5,500,000	9.78
Queensland	6,000,000	1.40
South Australia	500,000	0.21
Western Australia	3,000,000	0.48
Tasmania	1,500,000	8.94
Total	24,500,000	1.29

(ii) *Comparison with other Countries.* The absolute and relative forest areas of Australia and other countries are shown below :—

FOREST LANDS.—RELATIVE AREAS, VARIOUS COUNTRIES.

Country.	Total Wooded Area.	Percentage on Total Area.	Country.	Total Wooded Area.	Percentage on Total Area.
	Sq. Miles.	%		Sq. Miles.	%
Soviet Republics ..	2,662,000	37.81	Norway ..	27,434	21.95
Canada	965,234	26.78	Rumania ..	26,436	21.62
United States ..	724,150	24.35	Italy	21,309	17.81
India (British) ..	228,850	20.91	Spain	18,965	9.74
Sweden	90,889	57.35	Czecho-Slovakia ..	17,996	33.17
Japan	74,019	50.13	New Zealand ..	17,969	17.30
Finland	71,770	55.80	Austria	12,220	37.75
Germany	50,608	26.29	Latvia	7,027	27.70
France	39,8[illegible]3	18.74	Greece	5,844	11.71
Australia	**38,281**	**1.29**	United Kingdom	5,180	3.90
Poland	32,781	21.99			

3. **Requisite Proportion of Forest Area.**—It is generally held that when the proportion of forest in any country falls below 0.86 acres per head of the population, that country will be obliged to import timber. Australia possesses 4.01 acres of forest per head of population, and the excess of imports of timber over exports amounts to 28,000,000 cubic feet. There are two reasons for this excess. In the first place the area of 24,500,000 acres given as the wooded area comprises all forest lands, reproductive or otherwise. The bulk of this area consists of cut-over forests swept by fire at frequent intervals, and the area of really productive forests is not available. Secondly, Australia does not possess a surplus of softwoods, and must, therefore—with the exception of a small quantity produced in Queensland and northern New South Wales—import the bulk of its requirements from overseas. The figure 24,500,000 acres represents the total area that in the estimation of foresters should be reserved for forestry, and taking the factor of 0.86, then, when all the forest area of Australia has been brought under sylvicultural treatment, and is yielding its maximum of hard and soft woods, and none is being imported, the timber supply of Australia would support a population of 28½ millions.

§ 2. Activities of the Commonwealth Government.

Forestry was not included amongst the matters transferred by the States to the control of the Commonwealth, and federal supervision, therefore, is restricted to the forests in the Commonwealth Territories. These territories cover a large area, and, with the exception of the Northern Territory, are capable of sound forestry development. It is only during the last few years, however, that any attempt has been made to take stock of the forestry position. Reports have been issued in regard to Papua, New Guinea, the Federal Capital Territory, and Jervis Bay, and a general policy has been drawn up for the management of the forests of these Territories. So far as co-operation with the States is concerned, there has been progress in a small way in connexion with the investigation of minor forest products. The Commonwealth Institute of Science and Industry, for example, has carried out valuable research work into the pulping qualities of Australian hardwoods and into the tanning qualities of barks and other material. It is proposed to enlarge the work of investigation into minor products, and, through the Forestry Bureau of the Commonwealth Government, to co-operate with the States in major forest work. An Australian Forestry School has been founded, and the Federal Capital Commission has appointed a qualified forester to manage the forests at Canberra and Jervis Bay, while it is anticipated that in both New Guinea and Papua the forests will shortly be placed under scientific management.

§ 3. State Forestry Departments.

1. Functions.—Each State has organized a separate Department or Commission specially charged with the control and management of the State forests and timber reserves. Extensive survey work is carried on with a view to the classification of forest lands and the proclamation of State forests. The forests are improved by systematic cutting and scientific treatment, by judicious thinning and ringbarking, by the making of roads and the establishment of fire-breaks, and by the removal and destruction of debris, and stunted, diseased or suppressed growth. Provision is made for effective patrols in forest districts to check the ravages caused by fire, often due, it is believed, to carelessness. The training of forest officers, the conduct of research work, and the collection of forestry statistics are also undertaken.

2. Forest Reservations.—At the Interstate Conference on Forestry, held at Hobart in 1920, the forestry authorities of the various States agreed upon the necessity of reserving an area of 24,500,000 acres of indigenous forest lands to meet the future requirements of Australia. This area was distributed among the States as set out in § 1. 2 *ante*.

Having been endorsed by the Premiers' Conference held later in the same year, this area was adopted as the Australian forest ration towards which the authorities are now aiming for permanent reservation. The progress made in the various States to the end of June, 1927, is set out in the following table :—

AREA OF FOREST RESERVATIONS, 30th JUNE, 1927.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Dedicated State forests ..	5,277,739	3,581,371	1,799,155	(a)202,227	949,238	327,929	12,137,659
Timber and fuel reserves ..	1,595,726	749,081	3,418,818	..	675,780	1,642,792	8,082,197
Total ..	6,873,465	4,330,452	5,217,973	202,227	1,625,018	1,970,721	20,219,856

(*a*) Includes Timber and Fuel Reserves.

In addition to the work of permanently reserving their respective quotas, the State foresters are concerned with the surveying of all forest lands and the excising of those unsuitable for forestry. During the year considerable areas were revoked in certain States, but dedications of new areas resulted in a gain of 251,791 acres to the permanent estate, the greatest increase occurring in Tasmania.

The area of State forests reserved in perpetuity amounted in June, 1927, to 12,137,659 acres, or 49.5 per cent. only of the quota adopted for Australia. Of this area a considerable proportion consists of inaccessible mountainous country and cut-over lands, while the Australian quota recommended refers to merchantable forest only. The foresters of Australia are, therefore, faced with a difficult task in improving and preserving the existing forests, and in securing the reservation of further suitable forest country to ensure a permanent supply of accessible timber.

The Forestry Departments also control 8,082,197 acres of temporary timber and fuel reserves, but although these areas contain some land of high value for forestry purposes, the greater proportion thereof is not of importance for permanent reservation.

3. Sylvicultural Nurseries and Plantations.—Recognition of the necessity for systematic sylviculture has led to the creation in all of the States of a number of sylvicultural nurseries and plantations. The locality of these establishments, together with a brief statement of the nature of their activities, is given in previous issues of the Year Book. (Reference may be made to Official Year Book No. 6, pp. 451–3.) Details regarding forest plantations and employment are given hereunder :—

SYLVICULTURAL PLANTATIONS AND FORESTRY EMPLOYMENT, 1926–27.

Particulars.	New South Wales.	Victoria.	Q'land.	South Australia.	Western Australia.	Tasmania.	Total.
Total area of Effective Plantations—							
Softwoods .. Acres	13,440	12,000	2,217	17,186	2,658	608	48,109
Hardwoods .. Acres	..	2,276	374	9,111	..	..	11,761
Number of persons employed in Forestry Departments—							
Office Staff .. No.	28	36	60	9	38	2	173
Field Staff .. No.	363	131	218	274	(a)235	8	1,229

(a) Including 160 casual hands.

4. Revenue and Expenditure.—The revenue and expenditure of the State Forestry Departments from 1922–23 to 1926–27 are given below :—

FORESTRY DEPARTMENTS.—REVENUE AND EXPENDITURE, 1922–23 TO 1926–27.

State.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
REVENUE.					
	£	£	£	£	£
New South Wales	168,698	186,393	209,732	224,207	224,943
Victoria	163,076	166,556	162,792	161,608	156,700
Queensland	267,816	227,830	246,641	224,728	250,881
South Australia	8,362	11,110	22,905	19,418	24,376
Western Australia	87,658	127,253	182,764	227,061	222,507
Tasmania	19,346	21,150	20,757	20,715	18,600
Total	714,956	740,292	845,591	877,737	898,007
EXPENDITURE.					
	£	£	£	£	£
New South Wales	137,108	137,705	153,722	178,490	207,099
Victoria	138,714	160,373	199,575	274,732	320,217
Queensland	158,618	66,670	60,542	72,236	69,262
South Australia	40,822	40,487	43,459	53,977	120,036
Western Australia	38,827	48,333	86,739	101,321	103,319
Tasmania	8,293	8,277	11,435	13,007	12,098
Total	522,382	461,845	555,472	693,763	832,031

5. Instruction in Scientific Forestry.—Forestry schools have been established in New South Wales, Victoria, and Western Australia, in which general scientific instruction is imparted, special attention being paid to forestry. In the classes, theoretical forestry, botany, geology, physics, land surveying, etc., are taught; while in outside work trainees receive practical instruction in the preparation of seed-beds, seed-sowing, propagation, planting out, pruning, the general care and improvement of plantations and natural forests, and the employment of timber to the best advantage. Courses of lectures are also given at various centres, and, at some of the higher technical schools, members of the forest staffs are afforded opportunities of qualifying in special subjects. It was early realized, however, that a higher national school was necessary for the training of fully qualified foresters and this matter has engaged the attention of the forestry authorities in the various States since 1916. A site for the school was chosen, the curriculum was drawn up, and complete unanimity was arrived at regarding the higher training to be given at the institution, but matters were allowed to remain in abeyance. Early in 1925, however, the Commonwealth Government assumed the responsibility of establishing the institution, and the States agreed to nominate a certain number of students annually. The school, which opened with eighteen students in March, 1926, was housed for the first year at Adelaide University, but early in 1927 it was transferred to Canberra, the Federal Capital City. Applicants for entrance must be graduates of an Australian University or matriculated students who have completed a minimum University course of two years in science. The school provides a two years' course in pure forestry, and successful students are awarded the Commonwealth Forestry Diploma. It is anticipated that the Central College will supply the States with foresters qualified to undertake all necessary forestry work, and that it will constitute a nucleus of forest knowledge designed to develop on sound lines the sylviculture of Australia.

6. Forest Congresses.—Interstate Conferences on Forestry were held in 1911 and 1912, chiefly with a view of securing uniformity of management. An International Forest Congress was held at Paris in June, 1913, when a Professor of South Kensington Imperial College represented the Commonwealth Government. The papers and reports dealt chiefly with the threatened shortage of timber, and the measures necessary to avert the danger. An Imperial Forestry Conference was held in London in the summer of 1920, at which also Australia was represented. Important Interstate Forestry Conferences were held in Adelaide in May, 1916; at Perth in November, 1917; at Hobart in April, 1920; at Brisbane in April, 1922, and at Sydney in September, 1924. Australia was also represented at a World's Forestry Congress held at Rome during May, 1926. In 1928 an Empire Forestry Conference was held in Australia, which reaffirmed the resolution of the 1920 conference urging all Governments of the Empire to lay down a definite forestry policy. The summary report pointed out that although there was cause for satisfaction at the progress made during the past five years, it was imperative that continued effort should not be relaxed as it was feared that certain parts of the Empire were still oblivious to their obligations.

§ 4. Production.

1. Timber.—Estimates of the quantity and value of local timber sawn and hewn in the sawmills of the various States are given hereunder :—

SAWMILL OUTPUT OF NATIVE TIMBER, 1922–23 TO 1926–27.

State.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	1,000 sup. feet.	1,000 sup. feet.	1,000 sup. feet.	1,000 sup. feet.	1,000 sup. feet.
New South Wales ..	147,108	167,493	162,423	169,991	162,891
Victoria	118,336	134,639	114,705	109,534	115,813
Queensland	(*a*)126,088	(*a*)141,672	143,623	131,662	122,311
South Australia	1,187	1,350	3,981	3,362	3,971
Western Australia ..	(*a*)149,158	(*a*)161,749	(*a*)189,019	(*b*)271,662	156,087
Tasmania	(*a*)45,564	(*a*)63,120	50,799	53,588	52,058
Total	587,441	670,023	664,550	739,799	613,131

(*a*) Year ended 31st December. (*b*) Figures for eighteen months ended 30th June, 1926.

In addition to the timber shown above for Western Australia, the following quantities were hewn by contractors for the Railway Department, Mines, etc., or were sawn in establishments other than forest sawmills during the past five years:—1922–23, 29,901,378 sup. feet; 1923–24, 30,797,419 sup. feet; 1924–25, 18,118,199 sup. feet; 1925–26, 57,272,898 sup. feet; and 1926–27, 73,107,815 sup. feet.

2. Other Forest Products.—(i) *Eucalyptus Oil.* Oil may be distilled from the foliage of all varieties of eucalyptus, and several of them furnish a product widely known for its commercial and medicinal uses. Complete information regarding Australian production and consumption of eucalyptus oil is not available, but large quantities are manufactured, particularly in Victoria. Oversea exports amounted in 1922–23 to £33,990, in 1923–24 to £66,339, in 1924–25 to £75,763, in 1925–26 to £73,023, and in 1926–27 to £63,284, the bulk of the product being shipped from Victoria to the United Kingdom, the United States and Germany. Large quantities of the crude oil are used locally in flotation processes at the mines.

(ii) *Tan Barks.* The forests of Australia contain a wealth of tanning materials, all the eucalypts being capable of furnishing a percentage of tannin. The principal source of supply in Australia is obtained from the golden, and the black or green wattle, and in pre-war days the production was more than sufficient for local requirements and an export trade was built up. The supply is, however, diminishing, and since 1922–23 Australia has imported on the average about 2,900 tons each year from Natal, where the plantations were originally started from Australian seed. In addition to the wattle bark, a valuable tan bark is obtained from the mallet (*E. occidentalis*) of Western Australia. This bark is not extensively used in Australian tanneries, but is exported to Europe and other countries, where it is used for producing a tannin extract. A survey of the tanning materials of Australia was recently completed by the Council for Scientific and Industrial Research, and the results have shown that with one possible exception no new high-grade tanning materials were discovered that could be exploited commercially for tanning purposes in the natural form, i.e., as tanning bark. Several new materials, however, were found to have a high tannin content, but in the majority of cases abundant supplies would not be economically available for transport to consuming centres unless the varieties of trees concerned were systematically cultivated. Prospects for utilizing a large variety of materials are more favourable in connexion with the manufacture of blended tannin extracts at or near the centre of harvesting. A tannin content of about 30 per cent. was recorded for the first time for the bark of a gum-tree (*Eucalyptus alba*) from the Kimberleys in the north-west of Western Australia. The tannin of this bark possesses excellent tanning qualities, and ample supplies are believed to be available, but the cost of collection would be high. Other Western Australian materials which possess a high tannin content, and of which abundant supplies are available in the southern portion of the State are the bark of karri (*E. diversicolor*), the wood of tuart (*E. gomphocephala*), and red-gum or marri kino (*E. calophylla*). All these materials could be utilized if blended either with other known tanning materials occurring in the same area, or with soluble (sulphited) marri kino. Abundant supplies of mangrove barks are available both in tropical Australia and Papua. Their tannins might be worked up to form extract, either alone or blended with other lighter-coloured extractives. Blends of ridge-gum and mangrove bark are considered suitable for the manufacture of a high-grade extract. In the eastern States cypress pine bark is considered a promising raw material for the preparation of tannin extract. Blends with wattle have been tried. Silver wattle (*Acacia decurrens*, var. *dealbata*) might also be profitably worked up for tannin extract (alone or blended). None of the leaves and twigs examined was considered a promising material either for utilization in the original form or for the preparation of tannin extract, as in most cases the tannic content was low and the proportion of non-tannin too high. The production of tan bark in Australia is estimated at about 27,000 tons per annum.

3. Value of Production.—Though the valuation of the quantity of firewood consumed in Australia presents serious difficulty, an estimate of the total value of forest production is compiled annually with the following results for the past five years:—

VALUE OF FOREST PRODUCTION.—AUSTRALIA, 1922–23 TO 1926–27.

Production.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
	£	£	£	£	£
Total ..	9,344,000	10,292,000	10,577,000	10,964,000	11,016,000

§ 5. Commercial Uses of Principal Australian Timbers.

1. **General.**—The uses of the more important Australian timbers are many and various, and are indicated in previous issues of this work. (See Official Year Book No. 6, pp. 454–6; and Official Year Book No. 10, Section III., § 7 and 8.)

A list of the Australian timbers best known on the local markets appeared in Official Year Book No. 20, p. 713.

2. **Lack of Uniformity in Nomenclature.**—Unfortunately the vernacular names applied to the gums, ironbarks, etc., in the various States, and even in different parts of the same State, do not always refer to identical timbers. The resulting confusion has not only been productive of loss, but it has, to some extent, prejudicially affected the timber trade. This subject is referred to at some length in the special article "Australian Eucalyptus Timbers," in Section III., § 7 and 8, in Official Year Book No. 10. At the Forestry Conferences alluded to above, the matter came up for special consideration, and steps were taken to establish a uniform nomenclature.

§ 6. Oversea Trade.

1. **Imports.**—(i) *Dressed Timber.* The quantity and value of timber imports into Australia during the four years 1923–24 to 1926–27 inclusive are shown according to countries of origin in the following tables :—

DRESSED TIMBER.—IMPORTS, AUSTRALIA, 1923–24 TO 1926–27.

Country of Origin.	Quantity.				Value.			
	1923–24.	1924–25.	1925–26.	1926–27.	1923–24.	1924–25.	1925–26.	1926–27.
	sup. ft.	sup. ft.	sup. ft.	sup. ft.	£	£	£	£
United Kingdom ..	3,443	1,083	5,343	157,061	659	112	342	1,928
Canada	5,112,662	3,122,711	6,367,054	6,399,263	59,456	33,733	60,942	67,524
Other British Countries	17,998	109,050	46,477	57,513	568	1,363	1,079	700
Norway	38,071,271	41,824,922	41,419,031	44,103,595	528,346	605,784	506,705	487,284
Sweden	46,363,406	25,814,691	43,282,827	38,304,718	633,704	306,715	485,867	425,896
United States ..	8,040,984	15,789,591	15,303,997	7,561,278	94,492	173,095	161,674	78,504
OtherForeignCountries	48,032	39,147	1,460,169	1,405,503	1,168	2,004	22,419	24,143
Total ..	97,657,796	86,701,195	107,884,898	97,988,931	1,318,393	1,122,806	1,239,028	1,085,979

The figures in the table above are exclusive of items such as architraves, veneers, etc., quantities for which are either not shown, or are expressed in dissimilar units in the Customs entries. The total value of the items so excluded amounted to £215,481 in 1926–27, including plywood, veneered or otherwise, £148,735.

The bulk of the imports of dressed timber comes from Norway, Sweden, and the United States. Practically the whole of this timber consists of softwoods—deal and pine—used for lining, weatherboards, flooring, shelving, doors, box-making, etc.

(ii) *Undressed Timber.* Australian imports of undressed timber for the latest available four years are given hereunder :—

UNDRESSED TIMBER, INCLUDING LOGS (*a*).—IMPORTS, AUSTRALIA, 1923–24 TO 1926–27.

Country of Origin.	Quantity.				Value.			
	1923–24.	1924–25.	1925–26.	1926–27.	1923–24.	1924–25.	1925–26.	1926–27.
	sup. ft.	sup. ft.	sup. ft.	sup. ft.	£	£	£	£
United Kingdom	25,226	49,168	132,230	53,568	1,482	1,183	3,362	3,557
Canada ..	52,976,045	22,454,122	21,433,364	16,488,751	475,450	166,934	168,515	137,380
India	97,869	322,963	396,877	317,602	2,693	6,559	12,860	14,256
Malaya (British)	257,560	176,539	220,411	172,121	1,944	1,509	2,168	1,540
New Zealand ..	42,843,038	44,170,689	49,626,921	37,370,304	510,165	594,478	671,165	551,461
Other British Countries ..	971,622	890,033	1,567,528	2,563,920	9,803	9,112	15,354	20,460
Japan	5,082,326	8,103,367	6,895,043	8,365,463	113,196	200,187	136,835	176,516
Netherlands East Indies ..	577,930	928,474	1,252,129	377,217	8,058	10,230	9,649	3,124
Norway ..	1,724,176	3,528,405	787,576	365,855	27,207	37,086	7,916	4,021
New Caledonia ..	705,511	1,385,727	2,313,790	2,058,738	5,924	9,130	15,393	16,998
Philippine Islands	2,756,603	6,113,197	8,822,160	4,382,704	41,621	100,899	147,881	75,333
Sweden ..	6,914,823	5,864,057	6,465,812	3,716,748	96,407	61,583	60,643	36,428
United States ..	226,360,751	219,487,525	288,943,456	289,897,409	2,762,302	1,921,325	2,517,746	2,388,678
Other Foreign Countries ..	2,685,850	2,464,518	3,162,154	1,689,851	19,804	21,200	25,624	25,662
Total ..	343,979,380	315,938,784	392,019,451	367,820,251	4,076,056	3,141,415	3,795,111	3,455,414

(*a*) Exclusive of timber not measured in super. feet.

By far the larger proportion of the undressed timber imports consists of softwoods such as yellow pine, redwood, and oregon from the United States of America and Canada; kauri, rimu, and white pine from New Zealand; pine from Japan, and red deals from Norway and Sweden. Amongst the hardwoods imported, the principal are oak from the United States of America and Japan, and teak from India.

2. **Exports.**—The quantity and value of undressed timber exported from 1922–23 to 1926–27 are given below, the countries of destination being also shown :—

UNDRESSED TIMBER, INCLUDING LOGS (*a*).—EXPORTS, AUSTRALIA, 1922–23 TO 1926–27.

Country to which Exported.	Quantity.					Value.				
	1922–23	1923–24	1924–25	1925–26	1926–27	1922–23	1923–24	1924–25	1925–26	1926–27
	1,000 sup. ft.	1,000 sup. ft.	1,000 sup. ft.	1,000 sup. ft.	1,000 sup. ft.	£	£	£	£	£
United Kingdom ..	5,731	14,154	17,589	10,718	8,332	75,556	143,443	192,744	107,951	87,409
Canada	41	198	201	302	183	866	2,915	4,272	6,537	4,147
Ceylon	1,898	3,222	4,822	8,385	8,745	19,392	30,773	44,798	100,536	98,950
Hong Kong ..	334	..	..	131	927	3,883	..	..	1,618	12,566
India	2,672	12,588	1,230	7,920	12,071	28,468	125,865	11,274	79,890	130,772
Malaya (British) ..	176	..	..	4	6,575	5,045	..	..	25	67,347
Mauritius	2,367	2,335	2,448	67	293	24,546	29,349	24,152	1,040	2,927
New Zealand ..	24,845	36,349	46,318	31,750	28,793	324,052	510,035	680,802	424,214	369,920
Pacific Islands— Fiji	664	1,130	781	1,077	1,096	10,307	17,407	13,286	17,230	17,668
Territory of New Guinea ..	157	213	239	509	293	2,883	4,572	4,483	8,038	5,434
Other Islands ..	474	535	715	937	997	8,339	10,558	16,520	17,471	18,293
Papua	217	316	405	357	419	3,814	5,347	7,197	7,244	9,736
South African Union	42,370	24,681	51,902	47,130	50,278	472,564	273,713	558,511	527,138	554,298
Belgium	595	716	2,182	157	207	5,949	7,157	21,819	1,473	2,259
China	3,149	3,695	4	1,703	2,175	27,418	36,951	197	17,032	21,787
Egypt	1,981	5,341	66	518	19	19,963	55,666	664	5,156	192
Japan	173	116	..	50	35	2,169	2,100	..	742	618
Pacific Islands— New Caledonia ..	32	57	76	40	15	538	1,034	1,450	990	281
Other Islands ..	63	87	124	83	140	1,329	1,658	2,079	1,717	2,433
U.S. of America ..	439	399	469	846	800	11,196	9,318	12,169	20,131	18,160
Other Foreign Countries	122	276	433	501	1,361	1,865	3,587	5,855	6,377	15,182
Total ..	88,500	106,908	130,004	113,185	124,654	1,050,142	1,271,948	1,602,272	1,352,550	1,440,379

(*a*) Exclusive of timber not measured in super. feet.

As the table shows, the bulk of the exports of undressed timber was consigned to South Africa, New Zealand, India, and the United Kingdom, and consisted largely of the Western Australian hardwoods, jarrah, and karri, which have earned an excellent reputation for such purposes as railway sleepers, harbour works, wood paving, etc.

3. **Classification of Imports and Exports.**—(i) *General.* The quantities of timber classified according to varieties imported and exported during the year 1926–27 are given in the next table :—

TIMBER, VARIETIES IMPORTED AND EXPORTED.—QUANTITIES, AUSTRALIA, 1926–27.

Description.	Unit of Quantity.	Imports.	Exports.	Excess of Imports over Exports.
Dressed	sup. ft.	97,988,931	709,884	97,279,047
Undressed, including logs ..	,,	367,820,251	124,653,791	243,166,460
Architraves, mouldings, etc. ..	lin. ft.	170,070	61,356	108,714
Plywood, veneered or otherwise ..	sup. ft.	8,849,048	(*b*)	(*b*)
Palings	No.	..	491,998	−491,998
Pickets	,,	27,515	1,000	26,515
Shingles	,,	3,394,762	23,470	3,371,292
Staves—				
Dressed, etc.	,,	808,800	..	808,000
Undressed	,,	2,059,958	3,465	2,056,493
Laths—				
For blinds	,,	(*a*)	(*a*)	(*a*)
Other	,,	32,057,338	..	32,057,338
Doors	,,	43,118	(*a*)	43,118
Wood pulp	ton	11,270	(*b*)	11,270
Veneers	—	(*a*)	(*b*)	(*b*)
Spokes, rims, felloes, etc. ..	—	(*a*)	(*a*)	(*a*)
Other	—	(*a*)	(*a*)	(*a*)

(*a*) Quantity not available. (*b*) Exports not recorded separately.
NOTE.—The minus sign − denotes an excess of exports.

Similar particulars relative to the values of imports and exports during the year 1926–27 are shown hereunder :—

TIMBER, VARIETIES IMPORTED AND EXPORTED.—VALUES, AUSTRALIA, 1926–27.

Description.	Imports.	Exports.	Excess of Imports over Exports.
	£	£	£
Dressed	1,085,979	14,434	1,071,545
Undressed, including logs	3,455,414	1,440,379	2,015,035
Architraves, mouldings, etc.	1,189	478	711
Plywood, veneered or otherwise	148,735	(*a*)	(*a*) 148,735
Palings	..	5,436	−5,436
Pickets	247	21	226
Shingles	4,993	88	4,905
Staves—			
Dressed, etc.	45,601	..	45,601
Undressed	19,022	102	18,920
Laths—			
For blinds	2	80	−78
Other	46,942	..	46,942
Doors	30,203	885	29,318
Wood pulp	170,927	(*a*)	(*a*) 170,927
Veneers	14,032	(*a*)	(*a*) 14,032
Spokes, rims, felloes, etc.	3,643	2,502	1,141
Other	6,510	..	6,510
Total	5,033,439	1,464,405	3,569,034

NOTE.—The minus sign − denotes an excess of exports. (*a*) Exports not recorded separately.

(ii) *Sandalwood.* A considerable amount of sandalwood is annually exported principally from Western Australia to Hong Kong and China, where it is highly prized, and largely used for artistic and ceremonial purposes. Particulars for the past five years are as follows :—

SANDALWOOD.—EXPORTS, AUSTRALIA, 1922-23 TO 1926-27.

Country to which Exported.	Quantity.					Value.				
	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
	ton.	ton.	ton.	ton.	ton.	£	£	£	£	£
United Kingdom ..	..	..	..	1	25	2	..	..	7	858
Hong Kong ..	4,657	8,894	3,811	5,063	3,984	66,460	222,300	113,551	155,139	116,408
India	469	239	406	341	246	8,131	6,192	11,574	12,384	8,871
Malaya (British) ..	352	1,404	725	567	346	5,322	45,118	27,321	18,340	10,784
Other British Countries	2	..	..	1	12	30	..	..	53	533
China	2,419	3,754	1,722	2,255	3,991	30,876	83,415	53,031	66,639	114,626
Other Foreign Countries	..	..	..	7	11	3	..	..	245	411
Total ..	7,899	14,291	6,664	8,235	8,615	110,824	357,025	205,477	252,807	252,491

(iii) *Tan Bark.* Tan bark figures both as an export and import in the Australian trade returns, as the following tables show. The first table refers to exports :—

TAN BARK.—EXPORTS, AUSTRALIA, 1922-23 TO 1926-27.

Country to which Exported.	Quantity.					Value.				
	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
	cwt.	cwt.	cwt.	cwt.	cwt.	£	£	£	£	£
United Kingdom ..	12	..	48	104	..	3	..	48	58	..
New Zealand ..	12,718	5,278	4,061	1,008	1,633	8,299	3,263	2,372	701	1,355
Other British Possessions ..	309	..	332	..	102	194	..	170	..	51
Germany ..	..	9,005	36,081	303	2,050	..	4,983	19,587	159	1,272
Other Foreign Countries	4,490	3,318	2,272	5,033	2,150	2,220	2,172	1,155	2,900	1,332
Total ..	17,529	17,601	42,794	6,448	5,935	10,716	10,418	23,332	3,818	4,010

The exports of tan bark from Australia during the past four years consisted largely of mallet bark from Western Australia. The shipments of this bark are not so large as in pre-war days, owing to the cutting out of supplies. This bark is mainly despatched to Germany, where it is converted into a tannin extract.

A comparison of the imports and exports of tan bark during the last five years is given in the next table :—

TAN BARK.—IMPORTS AND EXPORTS, AUSTRALIA, 1922-23 TO 1926-27.

Particulars.	1922-23.	1923-24.	1924-25.	1925-26.	1926-27.
	cwt.	cwt.	cwt.	cwt.	cwt.
QUANTITIES—					
Imports	93,769	73,941	28,628	44,372	57,302
Exports	17,529	17,601	42,794	6,448	5,935
Excess of exports over imports	− 76,240	− 56,340	14,166	− 37,924	− 51,367
	£	£	£	£	£
VALUES—					
Imports	37,349	28,672	11,821	21,498	27,680
Exports	10,716	10,418	23,332	3,818	4,010
Excess of exports over imports	− 26,633	− 18,254	11,511	− 17,680	− 23,670

NOTE.—The minus sign — denotes excess of imports.

The imports consist almost exclusively of wattle bark from the plantations in South Africa. One variety of Australian wattle is found to flourish in the sandy belts near the coast, but it is the *Acacia decurrens*, var. *mollis*, which is chiefly relied upon for the production of wattle bark in the South African plantations. Seed has been tried from New South Wales, Tasmania, and Victoria, but it is stated that most of the seed is obtained from the best wattle bark areas in eastern Tasmania and western Victoria.

Two reasons are given to account for the success of the industry in South Africa. (*a*) It is found that the treeless, grassy highlands of Natal are specially suitable for wattle culture, and the trees can therefore be grown in rows and economically attended to, while the necessary bark sheds and other appurtenances can be placed in the most advantageous positions. (*b*) There is an abundance of cheap and efficient native labour available for employment on the plantations.

Considerable quantities of tanning substances other than bark are annually imported into the Commonwealth. The total value of the importations in 1926–27 was £84,783, and was composed as follows :—Wattle bark extract, £1,346 ; quebracho extract, £19,782 ; other extract, £23,326 ; and valonia, myrobalans, cutch, etc., £40,329.

CHAPTER XX.

FISHERIES.*

§ 1. General.

1. **Fish Stocks.**—Australia possesses an abundant and varied fish fauna, which embraces both tropical and temperate varieties and includes destructive as well as valuable species. In rivers and lakes both indigenous and imported varieties thrive. The latter have been introduced and acclimatized for industrial and sporting purposes by Governments and angling societies. Exploitation of the fishing areas—for some classes of fish for the whole year, for others during the breeding season only, or until a certain size is attained—is, where necessary, forbidden; proclaimed localities are closed against net-fishing, and a minimum size of mesh for nets is fixed. The sea-fishermen in some districts have made regulations in their own interests for the purpose of controlling the market supply.

2. **Progress of Industry.**—(i) *Transport and Marketing.* Despite the abundance of edible fish, the progress of the fishery industry in Australia has been slow, and transport and marketing of the proved supplies have not been satisfactorily dealt with.

In New South Wales, as shown in § 5 herein and § 6 of this Chapter in Official Year Book No. 17, the matter of exploiting trawlable fish was undertaken by the State Government, which also took steps to improve the conditions under which ordinary coastal fishing is carried on. In Queensland, State trawling was undertaken in 1919, and good trawling areas have been located and charted between Cape Moreton and Caloundra.

(ii) *Economic Investigations.* Although valuable work has been carried out by the State Governments in the way of experiment and culture, much yet remains to be done before the industry is at all commensurate in extent with the industrial progress or consuming capacities of the Commonwealth. All live fish imported into Australia are examined on shipboard in order to prevent the importation of undesirable fish. With the object of ascertaining the movements of oceanic fishes, and of estuarine fishes which make periodical oceanic migrations, reports are furnished regarding the various kinds of fishes, etc., and their movements along the coast. Details regarding the activities of the States in fish-culture were given in Official Year Book No. 6, pp. 471–2. By arrangement with the Commonwealth Fisheries Department some years ago members of the staff of the Australian Museum, Sydney, accompanied the F.I.S. *Endeavour* on various cruises. Specimens were collected, mounted for scientific purposes, and distributed to other Australian Museums, a considerable number being put aside for the Commonwealth Fishery Museum. As pointed out in § 4, however, this vessel was lost with all hands in 1914, and has not since been replaced.

With the object of reviewing the potentialities of the fishing industry of Australia the Development and Migration Commission convened a meeting of State and Commonwealth representatives. The Conference, which was held in Melbourne during September 1927, affirmed :—

(1) The importance of establishing a Marine Biological Institution to study the scientific problems connected with Australian fisheries, and to collect and disseminate authoritative information and give advice on matters concerning the fisheries.

(2) The desirability of establishing an experimental trawling unit to explore the fisheries resources of Australia.

Committees were formed to deal with important problems concerning the preservation, transportation, marketing, and distribution of fish, canning and curing of fish, the production of fish by-products, factors of destruction in fisheries, the development of the oyster industry, etc., on each of which subjects information is now being collected by personal investigations of State and Commonwealth officers and by the Commission's representative in London.

3. **Consumption of Fish.**—It has been said that the Australians are not an "ichthyophagous" race, seeing that the annual consumption of fish per head of population in Great Britain is set down at 42 lbs., while in Australia it has been estimated at only 13 lbs. The heavy imports of dried and preserved fish indicate, however, that

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* A specially contributed article dealing with the Marine and Fresh Water Fisheries of Australia appeared as § 6 of this Chapter in Official Year Book No. 17 (*vide* pp. 752 to 767 therein).

there is scope for the development of the industry, which now seems to be ill-managed, the price to the consumer being high, while the fisherman's gain is uncertain, and the system of distribution lacks method.

4. **Oyster Fisheries.**—Natural oyster beds exist on the foreshores in the shallow waters of inlets and estuaries in several parts of Australia. By husbanding the natural crop, and by judicious transplanting, the output has been very materially augumented. The areas are leased by the Government to private persons, lengths of foreshore being taken up under oyster leases. In New South Wales and Queensland the industry has thriven, and small yields are obtained in South Australia, Victoria, and Tasmania.

5. **Pearl-Shell, Pearls, Bêche-de-Mer, etc.**—(i) *General.* Pearl-shelling is carried on in the tropical waters of Queensland, the Northern Territory, and Western Australia. The pearl-oyster inhabits the northern and western coastal waters from Cape York to Shark Bay, a length of shore of over 2,000 miles. The shells are marketed in considerable quantities, and pearls are obtained in Queensland, Western Australia and the Northern Territory. The fishing is generally conducted with the aid of diving apparatus in water varying from 4 to 20 fathoms in depth. In Queensland and the Northern Territory the bêche-de-mer industry is carried on, and tortoise-shell is obtained on the coasts. Experiments have been made in cultivating the pearl-oyster on suitable banks. In October, 1911, a pearl weighing 178 grains, and valued at £3,000, was obtained at Broome. Further details regarding pearl-shelling are given in Official Year Book No. 6, p. 463. Trochus-shell to the value of £76,280 and £72,812 was exported from Australia during 1925–26 and 1926–27.

(ii) *Royal Commission on Pearl-shelling Industry.* In accordance with the "White Australia" policy it was originally determined that the employment of Asiatic labour in the pearl-shelling industry should be restricted, and ultimately cease, and it was proposed that after 31st December, 1913, permits to bring in Asiatics for the pearling-fleet should no longer be issued. In view, however, of the disorganization of the industry occasioned by the war, the time was extended to the 30th June, 1918, after which date permits to introduce Asiatic labour were to be granted only in cases where the diver and tender of a boat were Europeans. The Royal Commission appointed in March, 1912, presented its final report in 1916. The Commissioners stated that, though it might be practicable, they did not consider it advisable or profitable to attempt to transfer the industry from Asiatics to Europeans. They further stated that, while the labour now employed is almost entirely Asiatic, they did not consider that the "White Australia" policy would be weakened or imperilled by allowing the industry to continue as at present conducted.

§ 2. The Fishery Industry.

1. **Boats and Men Engaged, and Take.**—(i) *General Fisheries.* The returns have been compiled from particulars supplied by the State Departments, and while the data do not generally lend themselves to presentation on a uniform basis, the principal facts have been incorporated in the tables hereunder :—

GENERAL FISHERIES, 1926.

State or Territory.	No. of Boats Engaged.	Value of Boats and Equipment.	No. of Men Employed.	Total Take of—		Value of Take.	
				Fish.	Spiny Lobster (Crayfish).	Fish.	Spiny Lobster (Crayfish).
	No.	£	No.	cwt.	doz.	£	£
New South Wales ..	2,116	134,263	2,949	175,693	9,665	491,939	c78,369
Victoria	890	110,450	1,318	61,195	16,629	171,346	14,966
Queensland ..	739	57,144	1,459	60,200	d 7,217	135,238	d 8,808
South Australia ..	800	52,000	1,200	b 65,000	(a)	b150,000	(a)
Western Australia..	241	40,656	523	31,368	8,857	87,831	4,429
Tasmania ..	151	21,360	286	9,000	4,500	21,352	1,520
Northern Territory	3	200	10	700	..	1,333	..
Total ..	4,940	416,073	7,745	403,156	46,868	1,059,039	108,092

(a) Not available. (b) Estimate. (c) Including £66,046 the value of 9,311 cwt. prawns and 5,820 dozen crabs. (d) Crabs.

Returns for the past five years are given in the table below :—

GENERAL FISHERIES.—AUSTRALIA, 1922 TO 1926.

Particulars.		1922.	1923.	1924.	1925.	1926.
No. of boats engaged ..	..	3,873	3,776	4,346	4,399	4,940
No. of men employed ..	..	7,771	7,422	7,885	7,786	7,745
Fish obtained—						
Quantity	cwt.	*a*350,350	*a*319,148	*a*345,012	*a*341,133	403,156
Value	£	*a*793,263	*a*845,354	*a*882,042	*a*909,032	1,059,039
Lobsters obtained—Value	£	*a*54,796	*a*59,862	*a*75,893	*a*103,338	*a*108,092

(*a*) Exclusive of South Australia.

(ii) *Edible Oyster Fisheries.* The returns from oyster fisheries are given in the next table.

EDIBLE OYSTER FISHERIES, 1926.

State or Territory.	Number of Boats Engaged.	Value of Boats and Equipment.	Number of Men Employed.	Number of Leases.	Oysters Taken.	
					Quantity.	Value.
	No.	£	No.	No.	cwt.	£
New South Wales	1,283	31,480	630	4,866	55,498	103,600
Victoria	5	1,205	7	6	105	392
Queensland	59	6,276	96	484	10,029	17,272
South Australia (*b*)	..	..	..	..	..	..
Western Australia	..	..	..	..	..	..
Tasmania	4	600	19	(*a*)	360	*d* 3,820
Total (*c*)	1,351	39,561	752	5,356	65,992	125,084

(*a*) Not available. (*b*) Included with General Fisheries. (*c*) Exclusive of South Australia. (*d*) Including £3,100, value of scallops.

Returns for Australia for the last five years are given in the appended table :—

EDIBLE OYSTER FISHERIES.—(*b*) AUSTRALIA, 1922 TO 1926.

Particulars.		1922.(*a*)	1923.(*a*)	1924.(*a*)	1925.(*a*)	1926.
No. of boats engaged	..	624	694	725	741	1,351
No. of men employed	..	667	768	805	709	752
Oysters obtained—						
Quantity ..	cwt.	68,516	76,857	67,302	77,990	65,992
Value.. ..	£	110,305	122,874	113,623	133,161	125,084

(*a*) Exclusive of Tasmania. (*b*) Exclusive of South Australia.

(iii) *Pearls, Pearl-shell and Trepang.*—Figures regarding the production, trade, etc., for these items, so far as they are ascertainable, are given hereunder. As regards pearls, for obvious reasons no correct estimate can be obtained of the value of those found. Pearl-shell (*Margaritifera*) is widely distributed in North Australian waters over an area facing some thousands of miles of coastline, though not intensively over the whole distance. The north-west beds are the most prolific, but those around and to the north of Cape York are also of importance. There is need for further investigation into the occurrence of this valuable shell, as well as of trochus, green snail, window-pane shell (*Placuna*), the various types of trepang or bêche-de-mer (*Holothuria*), both in tropical Australian waters and in those of Papua and the mandated area of New Guinea. Particulars as returned for the year 1926 are as follows :—

PEARL, PEARL-SHELL, AND BÊCHE-DE-MER FISHERIES, (*a*), 1926.

State or Territory.	Number of Boats Engaged.	Value of Boats and Equipment.	Number of Men Employed.	Quantity of Pearl-shell obtained.	Value of Pearl shell obtained.	Value of Pearls obtained. (*b*)	Value of Bêche-de-mer obtained.	Value of Tortoise-shell obtained.
	No.	£	No.	Tons.	£	£	£	£
Queensland ..	125	80,000	1,380	922	121,444	12,760	29.383	947
Western Australia..	209	93,288	1,470	1,113	169,904	26,695	903	388
Northern Territory	14	8,000	43	63	11,500	200	900	20
Australia ..	348	181,288	2,893	2,098	302,848	39,655	31,186	1,355

(*a*) No pearl-shelling industry in New South Wales, Victoria, South Australia, and Tasmania.
(*b*) Incomplete; as returned.

The figures for tortoise-shell and trochus-shell as returned are defective, as the necessary information is not collected in full detail. In the following summary of production during the past five years, export figures of Australian origin are inserted for both of these items:—

PEARL, PEARL-SHELL, AND BÊCHE-DE-MER FISHERIES.—AUSTRALIA, 1922 TO 1926.

Particulars.		1922.	1923.	1924.	1925.	1926.
No. of boats engaged ..		356	388	387	416	348
No. of men employed ..		2,639	3,005	3,043	3,347	2,893
Pearl-shell obtained—						
Quantity ..	tons	2,271	2,292	2,784	2,602	2,098
Value.. ..	£	303,452	288,689	444,234	362,285	302,848
Pearls obtained (*a*)—						
Value.. ..	£	38,163	60,717	59,670	65,095	39,655
Bêche-de-mer obtained—						
Quantity ..	tons	(*b*)	(*b*)	(*b*)	(*b*)	(*b*)
Value.. ..	£	65,679	33,370	25,757	13,535	31,186
Tortoise-shell exported—						
Value.. ..	£	2,012	2,574	2,025	4,730	3,364
Trochus-shell exported—						
Value.. ..	£	25,095	23,142	47,892	76,280	72,812

(*a*) Incomplete; as returned. (*b*) Not returned.

2. **Fish Preserving.**—To encourage the industry, the Federal Parliament provided a bounty of ½d. per lb. for fish preserved as prescribed during the ten years 1907–8 to 1916–17. The payment, which amounted to only £3,005 during the period, or at the rate of £300 per annum, failed to develop the industry, and the bounty was not renewed on its expiration in 1916–17.

3. **State Revenue from Fisheries.**—The revenue from fisheries in each State during the year 1926 is given hereunder:—

FISHERIES.—REVENUE, 1926.

State or Territory.	Licences.	Leases.	Fines and Forfeitures.	Other Sources.	Total.
	£	£	£	£	£
New South Wales ..	1,356	12,691	451	1,215	15,713
Victoria	653	55	112	16	836
Queensland	2,946	2,460	66	3	5,475
South Australia	1,159	..	..	..	1,159
Western Australia ..	2,630	1,121	174	242	4,167
Tasmania	1,118	112	38	1	1,269
Northern Territory ..	28	..	..	..	28
Total	9,890	16,439	841	1,477	28,647

Similar particulars for Australia for the last five years are given in the following table :—

FISHERIES.—REVENUE, AUSTRALIA, 1922 TO 1926.

Particulars.	1922.	1923.	1924.	1925.	1926.
	£	£	£	£	£
Licences	9,092	10,013	9,551	12,557	9,890
Leases	14,181	13,419	15,944	15,927	16,439
Fines and Forfeitures ..	663	1,029	1,018	781	841
Other Sources	1,076	3,170	905	1,321	1,477
Total	25,012	27,631	27,418	30,586	28,647

§ 3. Oversea Trade in Fishery Products.

1. Imports of Fish.—The development of the local fishing industry leaves much to be desired, as is evident from the large imports. For the last five years the imports were as follows :—

FISH.—IMPORTS, AUSTRALIA, 1922-23 TO 1926-27.

Classification.		1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
Fresh (oysters) ..	cwt.	2,927	415	1,646	2,899	2,115
	£	4,091	301	1,222	2,228	1,699
Fresh, or preserved by cold process	cwt.	38,508	50,718	64,409	69,855	61,151
	£	127,172	165,948	197,690	205,163	180,773
Potted	cwt.	(a)	(a)	(a)	(a)	(a)
	£	69,422	101,085	110,347	130,969	146,782
Preserved in tins	cwt.	175,322	233,318	226,263	228,226	268,463
	£	867,708	1,158,048	1,120,428	1,164,223	1,418,103
Smoked, dried, and n.e.i.	cwt.	13,633	15,592	13,815	11,362	17,793
	£	56,190	63,167	51,831	45,079	62,984
Total	cwt. (b)	230,390	300,043	306,133	312,342	349,522
	£	1,124,583	1,488,549	1,481,518	1,547,662	1,810,341

(a) Not available. (b) Exclusive of potted fish.

Tinned fish constitutes by far the largest proportion of the imports, most of it consisting of salmon from Canada, the United States of America, Norway, and the United Kingdom. The potted fish comes chiefly from the United Kingdom, while the South African Union supplied the largest proportion of the fresh fish in 1926–27, the bulk of the remainder coming from the United Kingdom and New Zealand. The small import of oysters is supplied by New Zealand.

2. Exports of Fish.—The exports of local fish produce for the five years 1922–23 to 1926–27 are given hereunder :—

FISH (AUSTRALIAN PRODUCE).—EXPORTS, 1922-23 TO 1926-27.

Classification.		1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
Fish, fresh, smoked, or preserved by cold process	cwt.	9,692	5,681	3,449	1,498	435
	£	66,104	33,259	23,710	7,606	4,072
Preserved, in tins, dried, salted, etc.	cwt.	162	476	386	261	184
	£	433	1,185	1,401	491	371
Total ..	cwt.	9,854	6,157	3,835	1,759	619
	£	66,537	34,444	25,111	8,097	4,443

The quantity of fresh fish exported from Australia is trifling, and the amount of £4,072 shown in the table above consists chiefly of cured bêche-de-mer exported to Egypt from Queensland.

3. **Exports of Pearl and Other Shell.**—The exports of pearl, tortoise, and trochus-shell, of Australian origin, are given hereunder for the five years 1922–23 to 1926–27 :—

PEARL, TORTOISE, AND TROCHUS-SHELL.—EXPORTS, AUSTRALIA, 1922-23 TO 1926-27.

Article.		1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
Pearl-shell ..	cwt.	41,027	48,017	44,112	48,631	45,451
	£	320,602	377,313	413,095	391,695	352,626
Tortoise-shell ..	lb.	2,812	3,308	2,432	4,993	3,662
	£	2,012	2,574	2,025	4,730	3,364
Trochus-shell ..	cwt.	13,186	12,072	16,552	19,787	22,851
	£	25,095	23,142	47,892	76,280	72,812

The bulk of the pearl-shell exported during 1926–27 was consigned to the United States of America and the United Kingdom, the respective values of the shipments amounting to £207,339 and £142,745, while trochus-shell to the value of £68,847 was dispatched to Japan.

§ 4. The Commonwealth Department of Fisheries.

In 1907 the Commonwealth Government decided to demonstrate what might be attained commercially by the application of modern methods in fishery. A Federal Investigation Ship, the *Endeavour*, was constructed specially for the work, and a Director of Fisheries was appointed. Experimental cruises were undertaken, which showed that Australia possesses an asset of considerable value in her sea fisheries. The *Endeavour* was unfortunately lost at sea with all on board at the end of 1914 and has not been replaced. A description of the trawling grounds discovered, data regarding oceanography to the east of Australia, and a list of the publications of the Department are given in pp. 333 to 335 of Year Book No. 14.

§ 5. Trawling in Australian Waters.

The State Trawling Industry was established in New South Wales in 1915, and fishing operations were conducted with seven steel steam trawlers. The catches were landed at Sydney and Newcastle, and the fish distributed through retail shops, of which there were fourteen in the metropolitan area, one in Newcastle, and five in country towns. During the year ended 30th June, 1922, the State trawlers landed 2,413 tons of fish, valued at £101,337. Early in the year 1923 the Government discontinued trawling operations, as the venture was not a commercial success, and the assets have since been disposed of. The operations of the Government trawlers, however, revealed some of the richest trawling areas in the world, and these grounds are being successfully exploited by private enterprise.

CHAPTER XXI.

MINERAL INDUSTRY.

§ 1. The Mineral Wealth of Australia.

1. **Place of Mining in Australian Development.**—The value of production from the mineral industry is now considerably less than that returned by the agricultural or the pastoral industry, nevertheless it was the discovery of gold in payable quantities that first attracted population to Australia, and thus laid the foundation of its nationhood. Prior to 1851, the year when Hargraves' memorable discovery was made, coal and copper had both been mined to some extent, and the existence of deposits of other minerals, including gold, had been proved. But it was the news of the sensational finds of the precious metal in 1851 and the year immediately following that brought about a constant stream of immigration, and caused an increase in population from 405,000 at the end of 1850 to upwards of 1,146,000 at the end of 1860.

2. **Extent of Mineral Wealth.**—The extent of the total mineral wealth of Australia cannot yet be regarded as completely ascertained, as large areas of country still await systematic prospecting. The presence of considerable deposits of valuable minerals has long been known. Thus, coal was discovered in 1797, and a shipload was exported to Bengal in 1799, silver was discovered as early as 1839, and was worked as early as 1864; copper mining dates back to 1844; lead to about 1848; iron to about 1850; while the discovery of gold in payable quantities dates back to 1851. Cobalt, nickel, manganese, chromium, tungsten, molybdenum, mercury, antimony, bismuth, zinc, cadmium, radio-active ores, etc., have all been found, some in fairly large quantities. During recent years osmiridium has figured largely in the Tasmanian returns.

Among the more valuable non-metalliferous sustances other than coal may be mentioned coke, kerosene shale, graphite, alunite, asbestos, diatomaceous earth, phosphate, clays, ochres, etc.; in building stones—sandstones, syenites, granites, basalts, augite-andesite, porphyries, serpentines, slates, limestones, and marbles; in precious stones—diamonds, emeralds, rubies, sapphires, amethysts, precious opal, turquoise, topazes, garnets, chrysolites, cairngorm, agates, etc.

3. **Quantity and Value of Production during 1926.**—The quantities (where available) and the values of the principal minerals produced in each State, and in Australia as a whole during the year 1926, are given in the tables immediately following. It must be clearly understood that the figures quoted in these tables refer to the quantities and values of the various minerals in the form in which they were reported to the States Mines Departments, and represent amounts which the Mines Departments consider may fairly be taken as accruing to the mineral industry as such. They are not to be regarded as representative of Australia's potentiality as a producer of *metals*, this matter being dealt with separately in § 18 hereinafter. It may be explained, therefore, that the item pig-iron in New South Wales refers only to metal produced from locally-raised ore and so reported to the Mines Department. New South Wales is, of course, in normal times, a large producer of iron and steel from ironstone mined in South Australia. As the table shows, the latter State receives credit for this ironstone in its mineral returns, but the iron and steel produced therefrom cannot be assigned to the mineral industry of New South Wales. Similarly lead, silver-lead, and zinc are credited in the form reported to the State of origin—chiefly New South Wales—although the actual metal extraction is carried out to a large extent elsewhere.

MINERAL PRODUCTION.—QUANTITIES, 1926.

Minerals.	Unit.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T. (*d*)	Australia.
Alunite	ton	580	..	..	..	..	..	..	580
Antimony ..	,,	85	..	10	..	5	..	..	100
Arsenic	,,	405	..	815	..	(*c*)	..	..	1,220
Asbestos ..	,,	5	..	..	..	105	..	..	110
Barytes	,,	200	..	..	1,742	..	..	..	1,942
Bismuth	cwt.	165	..	..	..	..	..	..	165
Brown Coal ..	ton	..	957,935	..	..	..	..	..	957,935
Chromite	,,	597	..	..	..	..	..	..	597
Coal	,,	10,885,766	591,001	1,221,059	..	474,819	102,358	..	13,275,003
Cobalt	,,	..	..	27	..	..	..	..	27
Copper (ingot, matte, etc.)	,,	357	..	1,217	232	1	6,915	..	8,722
Copper ore ..	,,	..	..	..	..	..	..	7	7
Diatomaceous earth	,,	911	..	..	..	..	..	..	911
Gold	fine oz.	19,435	49,078	10,339	758	437,343	4,222	140	521,315
Gypsum	ton	817	10,217	..	65,613	3,918	..	..	80,565
Iron (pig) (*b*) ..	,,	105,201	..	..	..	..	..	..	105,201
Iron oxide ..	,,	3,251	..	..	..	..	..	..	3,251
Ironstone ..	,,	..	..	4,412	583,745	..	..	..	588,157
Kaolin	,,	4,748	3,153	..	200	..	..	..	8,101
Lead	,,	..	..	3,735	28	..	5,893	..	9,656
Lead and silver ore, concentrates, etc.	,,	274,513	..	..	..	4,162	..	52	278,727
Limestone flux ..	,,	109,698	..	72,426	119,714	..	153,707	..	455,545
Magnesite ..	,,	10,263	94	..	226	..	..	..	10,583
Manganese ore ..	,,	1,290	..	20	..	82	..	..	1,392
Molybdenite ..	cwt.	8	840	..	..	..	..	..	848
Osmiridium ..	oz.	..	..	..	..	..	3,173	..	3,173
Phosphate ..	ton	253	120	..	882	..	..	..	1,255
Pigments ..	,,	526	2,338	..	36	..	38	..	2,938
Platinum ..	oz.	397	..	..	..	..	..	..	397
Salt	,,	..	(*a*)	..	91,101	..	..	..	91,101
Sapphires ..	,,	1,808	..	..	..	..	..	..	1,808
Shale (oil) ..	ton	..	..	..	..	..	2,127	..	2,127
Silver	fine oz.	9,342	2,373	252,540	353	68,413	766,653	..	1,099,674
Tin and tin ore ..	ton	1,134	29	1,058	..	67	1,096	98	3,482
Wolfram ..	,,	..	..	1	..	..	83	..	84
Zinc and concentrates	,,	267,533	..	200	..	..	5,378	..	273,111

(*a*) Not available for publication. (*b*) See letterpress preceding this table. (*c*) Quantity not stated : Contained in gold ore. (*d*) Year ended 30th June.

The values of the minerals raised in each State during 1926 are given in the following table :—

MINERAL PRODUCTION.—VALUE, 1926.

Minerals.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T. (*e*)	Australia.
	£	£	£	£	£	£	£	£
Alunite	2,320	..	..	..	..	..	..	2,320
Antimony ..	1,236	..	105	..	85	..	..	1,426
Arsenic	5,837	..	5,450	..	347	..	..	11,634
Asbestos ..	20	..	..	..	2,728	..	..	2,748
Barytes ..	400	..	..	5,226	..	..	..	5,626
Bismuth ..	773	..	..	..	..	..	..	773
Brown Coal ..	..	188,899	..	..	..	..	..	188,899
Chromite ..	1,704	..	..	..	..	..	..	1,704
Coal	9,436,520	657,798	1,098,927	..	394,400	90,401	..	11,678,046
Cobalt	..	..	5,430	..	..	..	..	5,430
Copper (ingot and matte) ..	22,473	..	73,591	14,681	84	454,854	..	565,683
Copper ore ..	..	..	..	..	..	..	60	60
Diamonds ..	77	..	..	..	..	..	..	77
Diatomaceous earth	1,765	..	..	..	..	..	..	1,765
Gold	82,551	208,471	43,914	3,219	1,857,716	17,936	594	2,214,401
Gypsum ..	1,287	7,613	..	57,411	5,618	..	..	71,929
Iron (pig) (*b*) ..	578,605	..	..	..	..	..	..	578,605
Iron oxide ..	1,958	..	..	..	..	..	..	1,958
Ironstone ..	..	..	3,914	671,307	..	..	..	675,221
Kaolin	5,087	4,157	..	900	..	..	..	10,144
Lead	..	..	116,156	819	..	183,167	..	300,142
Lead and silver-lead ore, concentrates, etc. ..	4,398,823	..	..	..	76,741	..	447	4,476,011

For notes see next page.

MINERAL PRODUCTION—VALUE, 1926—*continued.*

Minerals.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. T. (*e*)	Australia.
	£	£	£	£	£	£	£	£
Limestone flux ..	27,049	..	36,657	44,893	..	153,219	..	261,818
Magnesite ..	14,375	281	..	565	..	..	..	15,221
Manganese ore ..	3,955	..	40	..	503	..	..	4,498
Molybdenite ..	41	7,350	..	..	..	..	..	7,391
Opal	11,485	..	600	10,330	..	..	..	22,415
Osmiridium ..	..	..	..	..	..	61,908	..	61,908
Phosphate ..	316	120	..	864	..	..	..	1,300
Pigments ..	644	1,935	..	297	..	69	..	2,945
Platinum ..	6,910	..	..	..	..	..	..	6,910
Salt	..	(*a*)	..	204,977	..	..	..	204,977
Sapphires ..	2,418	..	6,799	..	..	..	..	9,217
Shale (oil) ..	..	..	..	..	..	1,475	..	1,475
Silver	1,130	307	31,568	46	8,863	97,988	..	139,902
Tin and tin ore ..	326,474	5,075	174,147	..	10,450	322,526	15,852	854,524
Wolfram ..	..	..	48	..	..	5,265	..	5,313
Zinc & concentrates	1,359,588	..	6,827	..	..	183,362	..	1,549,777
Unenumerated ..	(*d*) 23,444	..	4,488	16,818	14,329	1,827	(*c*)2,132	63,038
Total ..	16,319,265	1,082,006	1,608,661	1,032,353	2,371,864	1,573,997	19,085	24,007,231

(*a*) Not available for publication. (*b*) See letterpress, page 751. (*c*) Mica. (*d*) Includes dolomite £5,900, silica £9,700, and fireclay £6,900. (*e*) Year ended 30th June.

It may be pointed out in connexion with the figures given in the above table that the totals are exclusive of returns relating to certain commodities, such as stone for building and industrial uses, sand, gravel, brick and pottery clays, lime, cement, and slates, which might rightly be included under the generic term "mineral." Valuations of the production of some of these may be obtained from the reports of the various Mines Departments, but in regard to others it is impossible to obtain adequate information. In certain instances, moreover, the published information is of little value. By restricting the comparison to items in connexion with which properly comparable information can be obtained for each State, it is believed that a satisfactory estimate of the progress of the mineral industry can be more readily obtained. The items excluded from the total for New South Wales in 1926 consist of—lime, £127,360; building stone, £168,216; Portland cement, £1,473,522; coke, £940,416; road materials, £567,481; shell grit, £835; mineral water, £205; sulphur and sulphuric acids, £92,297; and brick and pottery clays, £361,419. From the Queensland returns, marble, £80 has been deducted, while carbide, £68,400, and cement £166,447 have been excluded from the Tasmanian figures.

4. **Value of Production, 1922 to 1926.**—The value of the mineral production in each State during the five years 1922 to 1926 is given in the table hereunder :—

MINERAL PRODUCTION.—VALUE, 1922 TO 1926.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. T.	Australia.
	£	£	£	£	£	£	£	£
1922 ..	12,951,164	1,244,966	1,859,084	331,866	3,041,112	878,009	9,959	20,316,160
1923 ..	14,176,688	1,031,223	2,215,498	890,378	2,747,101	1,154,397	16,612	22,231,897
1924 ..	16,299,835	964,917	2,305,669	953,592	2,776,796	1,325,967	19,138	24,645,914
1925 ..	16,657,585	1,000,763	2,012,456	1,028,396	2,393,890	1,477,944	21,715	24,592,749
1926 ..	16,319,265	1,082,006	1,608,661	1,032,353	2,371,864	1,573,997	19,085	24,007,231

For New South Wales the value of production in 1926 was about £338,000 lower than that for 1925, which was the highest ever recorded. The falling-off in 1926 was largely due to the decreased returns from silver, lead, and zinc, which were offset to some extent by increases in tin, iron, and coal.

The increase in the Victorian returns for 1926 was chiefly due to improved figures for coal, the value of black coal showing a yield of £62,000 in excess of that for 1925, while the value of brown coal produced rose by £22,000. For 1926 the value of brown coal was nearly £189,000, as compared with £41,000 in 1924.

In Queensland the falling-off in production in 1926 was due to lessened returns from gold, copper, silver, and lead. The Mines Department, however, states that obsolete plant and methods of treatment are responsible for a large proportion of the reduced output. Some of the mining companies have recognized this, and are introducing improvements which it is believed will result in enhanced returns from such metals as copper and tin. The very small return shown in South Australia for 1922 was due principally to the temporary cessation of operations at the ironstone deposits at Iron Knob, the value of the ore raised being £58,000, as compared with £587,000 in 1921. The improvement in the returns for this State during the last four years was largely resultant on the increased production of iron ore, the value of which rose to over £671,000 in 1926. The yield from salt advanced from £109,000 in 1922 to nearly £205,000 in 1926, while good increases were shown in gypsum and limestone flux. In Western Australia the returns for 1926 show a decrease of about £22,000 on the total for 1925, the fall being due to the decline in the returns from gold and silver lead, although the figures for coal showed a good increase. The increased production for 1926 in Tasmania was largely due to zinc, which showed a rise of £72,000 on the total for 1925, while there were higher yields from limestone flux, tin, coal, and copper, than those returned in the previous year. On the other hand the value of osmiridium produced was about £41,000 lower than in 1925, the decline being due to the lower price received for the metal in 1926. It is stated that the decline in the Northern Territory returns for 1926 as compared with 1925 was due to the fact that some of those engaged in mining forsook it to take up more profitable work in other pursuits.

5. Total Production to end of 1926.—In the next table will be found the estimated value of the total mineral production in each State up to the end of 1926. The figures given in the table are also exclusive of the same items referred to in connexion with the preceding table. Thus the total for New South Wales falls short by £26,307,000 of that published by the State Department of Mines, the principal items excluded being coke, £11,014,000; cement, £12,088,000; lime, £1,245,000; and considerable values for marble, slate, granite, chert, gravels, etc., which the Department now includes in the returns for quarries.

MINERAL PRODUCTION.—VALUE TO END OF 1926.

Minerals.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor.Ter.(a)	Australia.
	£	£	£	£	£	£	£	Million. £
Gold ..	63,704,810	303,076,885	85,631,144	1,628,227	158,517,414	8,908,720	2,282,263	624
Silver and lead ..	108,902,368	264,326	4,129,596	381,251	2,215,685	8,261,110	63,579	124
Copper ..	15,540,299	216,656	25,767,115	33,091,881	1,805,082	18,224,367	232,852	95
Iron ..	6,741,852	15,641	472,279	5,404,847	36,721	52,110	..	13
Tin ..	13,678,138	948,709	10,626,749	..	1,547,916	16,463,413	584,640	44
Wolfram	272,187	11,885	1,061,672	301	1,441	202,175	216,859	2
Zinc ..	19,974,741	..	13,460	15,993	5,437	420,858	..	20
Coal ..	160,390,428	9,280,659	15,341,114	..	4,952,736	1,434,912	..	191
Other ..	7,567,276	829,784	2,832,200	3,537,498	161,560	1,378,544	40,626	16
Total ..	396,772,099	314,644,545	145,875,329	44,059,998	169,243,992	55,346,209	3,420,819	1,129

(a) To 30th June, 1926.

The "other" minerals in New South Wales include alunite, £209,000; antimony, £346,000; bismuth, £233,000; chrome, £121,000; diamonds, £144,000; limestone flux, £1,102,000; molybdenite, £212,000; opal, £1,561,000; scheelite, £192,000; and oil shale, £2,691,000. In the Victorian returns antimony ore was responsible for £612,000. The value for coal in this State includes £653,000 for brown coal. Included in "other" in the Queensland production were opal, £183,000; gems, £611,000; bismuth, £118,000; cobalt, £148,000; molybdenite, £599,000; and limestone flux, £815,000. The chief items in South Australian "other" minerals were salt, £2,131,000; limestone flux, £418,000; gypsum, £462,000; and phosphate, £130,000. In the Tasmanian returns limestone flux was responsible for £546,000, osmiridium for £474,000, scheelite for £112,000, and iron pyrites for £94,000.

6. Decline in the Metalliferous Industry.—On the 1st December, 1921, a Select Committee was appointed by the Legislative Assembly of New South Wales to inquire into and report upon the serious decline in the metalliferous industry. The result of the Committee's investigations was published in a Report issued in 1922, wherein the chief contributing causes of the decline in New South Wales and in Australia generally were summarized as follows :—(1) High cost of production : (2) Deterioration in ore values in existing mines : (3) Inadequate machinery : (4) High freights : (5) High treatment charges : (6) Imperfect labour conditions in mines : (7) Lack of new payable discoveries : (8) Lack of efficiently-supported prospecting.

7. Geophysical Methods for Detection of Ore Deposits.—Recently considerable attention has been devoted to gravimetric, surface potential, inductive, or magnetic methods of locating ore bodies, and the Empire Marketing Board has provided a sum of £16,000 spread over two years, conditionally on the Commonwealth Government making available an equal amount for the purpose of undertaking test surveys. The Government Geologist of New South Wales, after a close study of the methods in use in other countries, whilst deprecating undue optimism, suggested the Hunter River Basin, the Broken Hill District, and the Greater Cobar District as suitable fields for the application of geophysical methods.

8. Precious Metals Prospecting Act of 1926.—Under the provisions of this Act a sum of £40,000 was allocated by the Commonwealth Government to assist persons or companies engaged in prospecting for precious metals. Of the total sum an amount of £15,000 was set aside for the Northern Territory, and the balance to the States in proportions to be determined by the Minister.

§ 2. Gold.

1. Discovery in Various States.—The discovery of gold in payable quantities was an epoch-making event in Australian history, for, as one writer aptly phrases it, this event "precipitated Australia into nationhood." A more or less detailed account of the finding of gold in the various States appears under this section in Official Year Books Nos. 1 to 4, but considerations of space preclude its repetition in the present issue.

2. Production at Various Periods.—In the following table will be found the value of the gold raised in the several States and in Australia as a whole during each of the six decennial periods from 1851 to 1920, and in single years from 1921 to 1926, from the dates when payable discoveries were first reported. Owing to defective information in the earlier years the figures fall considerably short of the actual totals, for during the first stages of mining development, large quantities of gold were taken out of Australia by successful diggers, who preferred to keep the amount of their wealth secret.

GOLD.—VALUE OF PRODUCTION, 1851 TO 1926.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Australia.
	£	£	£	£	£	£	£	£
1851-60 ..	11,530,583	93,337,052	14,565	..	..	788,564	..	105,670,764
1861-70 ..	13,676,103	65,106,264	2,076,494	..	..	12,174	..	80,871,035
1871-80 ..	8,576,654	40,625,188	10,733,048	579,068	..	700,048	79,022	61,293,028
1881-90 ..	4,306,541	28,413,792	13,843,081	246,668	178,473	1,514,921	713,345	49,216,821
1891-1900	10,332,120	29,904,152	23,989,359	219,931	22,308,524	2,338,336	906,988	89,999,410
1901-10 ..	9,569,492	30,136,686	23,412,395	310,080	75,540,415	2,566,170	473,871	142,009,109
1911-20 ..	4,988,377	13,354,217	9,876,677	238,808	46,808,351	873,302	100,652	76,240,384
1921 ..	271,302	554,087	214,060	13,933	2,935,693	28,311	1,299	4,018,685
1922 ..	118,359	501,515	378,154	4,693	2,525,811	16,101	540	3,545,173
1923 ..	83,325	422,105	392,563	4,199	2,232,179	16,300	743	3,151,414
1924 ..	86,905	312,398	459,716	4,093	2.255,932	21,516	3,270	3,143,830
1925 ..	82,498	200,958	197,118	3,535	1,874,320	15,041	1,939	2,375,409
1926 ..	82,551	208,471	43.914	3,219	1,857,716	17,936	594	2.214,401
Total ..	63,704,810	303,076,885	85,631,144	1,628,227	158,517,414	8,908,720	2,282,263	623,749,463

The value of the gold yield in 1926 was the lowest recorded since the discovery of the precious metal in 1851.

The amount of gold raised in Australia in any one year attained its maximum in 1903, in which year Western Australia also reached its highest point. For the other States the years in which the greatest yields were obtained were as follows :—New South Wales, 1852 ; Victoria, 1856 ; Queensland, 1900 ; South Australia, 1904; and Tasmania, 1899.

The following table shows the quantity in fine ounces of gold raised in each State and in Australia during each of the last five years, the value of one ounce fine being taken at £4 13s. 10¼d. in 1922, at £4 8s. 5¾d. in 1923, at £4 13s. 0¼d. in 1924, and £4 4s. 11$\frac{5}{11}$d. in 1925 and 1926 :—

GOLD.—QUANTITY PRODUCED, 1922 TO 1926.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Nor. Ter.	Australia.
	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.	Fine ozs.
1922 ..	25,222	106,872	80,584	1,000	538,246	3,431	(a) 115	755,470
1923 ..	18,833	95,403	88,726	949	504,511	3,684	(a) 168	712,274
1924 ..	18,685	67,167	98,841	880	485,035	4,626	(a) 703	675,937
1925 ..	19,422	47,296	46,406	832	441,252	3,524	(a) 456	559,188
1926 ..	19,435	49,078	10,339	758	437,343	4,222	(a) 140	521,315

(a) Year ended 30th June.

Unfortunately the general decline which has characterized Australia's gold output for a number of years has not been checked by new finds of importance, and unless more economic methods of exploiting existing low-grade deposits can be evolved the depression is likely to continue.

3. **Changes in Relative Positions of States as Gold Producers.**——A glance at the figures in the table showing the value of gold raised will sufficiently explain the enormous increase in the population of Victoria during the period 1851 to 1861, when an average of over 40,000 persons reached the State each year. With the exception of the year 1889, when its output was surpassed by that of Queensland, Victoria maintained its position as the chief gold-producer for a period of forty-seven years, or up to 1898, when its production was outstripped by that of Western Australia, the latter State from this year onward contributing practically half, and so far as recent years are concerned more than half the entire yield of Australia. New South Wales occupied the second place on the list until 1874, when Queensland returns exceeded those of the parent State, and, with the exception of the year 1921, maintained this pre-eminence to the end of 1924. South Australia has occupied the position of lowest contributor to the total gold yield since the year 1871. Taking the average of the last ten years, the relative position of each State in regard to the gold production of Australia was as follows :—

GOLD.—RELATIVE POSITION OF STATES AS PRODUCERS, 1917 TO 1926.

State.	Annual Average of Gold Production, 1917 to 1926.	Percentage on Total.	State.	Annual Average of Gold Production, 1917 to 1926.	Percentage on Total.
	Ozs.			Ozs.	
Total	872,286	100·0	New South Wales	43,673	5·00
Western Australia ..	615,885	70·7	Tasmania ..	6,379	0·07
Victoria	111,925	12·8	South Australia ..	2,529	0·03
Queensland ..	91,441	10·5	Northern Territory	454	..

4. **Methods of Gold Mining adopted in Each State.**—(i) *New South Wales.* Approximately half the production in 1926 was obtained by dredges operating in the Adelong and Gundagai divisions. The yields from alluvial other than by dredging amounted to

1,802 ozs., of which 108 ozs. were won in the Tumut and Adelong district, 340 ozs. at Tambaroora and Turon, 222 ozs. at Peel and Uralla, 130 ozs. in the Southern area, 287 ozs. at Mudgee, and 485 ozs. at Bathurst. From stone treated the production was 5,155 ozs., about 3,000 ozs. of the total coming from the Lachlan district. The Southern district contributed 600 ozs., Bathurst, 450 ozs.; Hunter and Macleay, 400 ozs.; Tambaroora and Turon, 300 ozs., and smaller quantities were returned from the New England and Peel and Uralla areas. From the Cobar district, which for many years was the principal producer, the yield in 1926 was only 69 ozs., as compared with over 3,000 ozs. in 1922.

(ii) *Victoria.* Reef mining predominates in Victoria, although gold is also obtained from alluvial workings, both surface and deep leads. Owing to the exhaustion of much of the payable auriferous area the yield has been on the down grade for many years, and with the exception of 1925, the return for 1926 was the lowest experienced since 1851. A considerable amount of attention is given to dredging and hydraulic sluicing, particularly in the Beechworth, Maryborough, Castlemaine, Ararat, Stawell, Gippsland, and Ballarat districts. The yields from alluvial and quartz respectively as returned (in crude ounces) from the chief mining districts of the State during 1926 were as follows:—Ararat and Stawell, 1,492 and 35; Ballarat, 712 and 1,474; Beechworth, 3,384 and 15,905; Bendigo, 367 and 16,415; Castlemaine, 1,110 and 10,887; Gippsland, 212 and 1,103; and Maryborough, 185 and 738. The yield from the cyanide plants amounted to 1,323 ozs.

The largest output from quartz mining in the Bendigo district was furnished by the Hercules and Energetic, 6,392 ozs., £25,230, followed by the New Red, White, and Blue, 5,157 ozs., £20,624; and Carlisle, 1,753 ozs., £7,018. In the Beechworth district the Rose, Thistle, and Shamrock at Harrietville returned 5,886 ozs., £24,164; and the Morning Star, at Woods Point, 2,077 ozs., £6,856. In the Daylesford area of the Castlemaine district the Ajax returned 3,522 ozs., £13,087; the Nuggetty North, 908 ozs., £3,632; and the Ajax North, 691 ozs., £2,780. In the Tarrengower area of this district, the New Oswald returned 2,503 ozs., £10,008; and the Goldsbrough, 1,491 ozs., £7,089. In the Gippsland district the Loch Fyne Co. at Jericho produced 3,526 ozs., valued at £13,183; and the Golden Lily at Donnelly's Creek, 722 ozs., valued at £2,979. From the once famous Ballarat area the yield in 1926 was only slightly in excess of £5,000.

From alluvial the principal yield was obtained by Cock's Pioneer Gold and Tin Mines, with 2,250 ozs., valued at £9,002. This Company, which operates in the Beechworth district, also produced about £5,000 worth of tin during the year. The Langi Logan mines at Ararat returned 1,558 ozs., valued at £6,178.

(iii) *Queensland.* Operations in Queensland are chiefly confined to reefing, and to the production of gold in connexion with the smelting of copper and other ores, the yield from alluvial in 1926 being only 1,321 ozs., of which 1,020 ozs. were obtained at Batavia River, while the quantity produced from stone treated was 5,956 ozs.; from copper and other ores 863 ozs.; and from old tailings 2,199 ozs.; making a total production of 10,339 ozs. The yields from the principal fields were—Ravenswood, 2,806 ozs.; Gympie, 2,745 ozs.; Mount Coolon, 1,569 ozs.; and Etheridge, 1,026 ozs. From the Mount Morgan field, which returned nearly 34,000 ozs. in 1925, the yield in 1926 was only 34 ozs. Owing to the fire and subsequent flooding of the mine, underground working has been replaced by quarrying, and it is hoped that improved methods of treatment of the ore will result in an increase in the yield. The once famous Charters Towers field is apparently approaching exhaustion. Recently a Company has been formed to test the old Palmer River field by systematic dredging.

(iv) *South Australia.* Gold is found in widely-scattered localities in South Australia, but the production has at no period been large. During the last five years the yield has declined from 1,000 ozs. in 1922 to 758 ozs. in 1926. Of the total yield in the latter year, over 700 ozs. were produced at Tarcoola.

(v) *Western Australia.* A grouping of the auriferous deposits of Western Australia under various headings was given in previous issues (see Official Year Book 19, p. 725), but considerations of space preclude its retention in the present issue.

The yields from the principal fields in order of importance were as follows:—East Coolgardie, 304,037 ozs.; Mt. Margaret, 43,628 ozs.; Murchison, 33,487 ozs.; Yilgarn, 11,792 ozs.; Yalgoo, 6,382 ozs.; North East Coolgardie, 6,199 ozs.; Coolgardie, 5,998 ozs.; East Murchison, 5,336 ozs.; Dundas, 2,682 ozs.; North Coolgardie, 2,472 ozs.; Pilbara, 2,376 ozs.; Peak Hill, 2,140 ozs. and Broad Arrow, 1,460 ozs. Of the total yield of 428,330 ozs. reported to the Mines Department, 423,818 ozs. were obtained from ore treated, 2,645 ozs. from dollied and specimens, while the return from alluvial was about 1,867 ozs. The total referred to differs somewhat from that quoted in the first table in this chapter, which represents gold exported and minted. It may be noted here that the total amount of dividends paid by Western Australian mining companies to the end of the year 1926 was £28,622,000.

Western Australia reached its zenith as a gold-producer in 1903, when the output was valued at £8,771,000, but since then there has been a more or less steady decline until in 1926 the total had dropped to £1,858,000. Three causes may be adduced to account for this falling-off—(1) Exhaustion of known rich deposits: (2) Unwise development, *i.e.*, "picking the eyes" of good mines: (3) Increased cost of stores, equipment, and labour, rendering it unprofitable to treat low-grade ores. During the year 1926 the Commonwealth Development and Migration Commission appointed a technical Committee to report on the best means of reviving the industry. This Committee made various recommendations in regard to the Kalgoorlie and Gwalia areas, and negotiations were in progress in 1927 between the Governments and the mining and financial interests concerned with a view to giving effect to these recommendations.

(vi) *Tasmania.* The yield in Tasmania in 1926 amounted to 4,222 ozs., an advance about 700 ozs. on the total for 1925. The principal producers in 1926 were the Mt. Lyell Co. with 2,306 ozs. (from copper matte), and the Golden Gate, with 1,481 ozs. About 130 ozs. were obtained by the Round Hill mine from silver-lead ore.

(vii) *Northern Territory.* The production for 1926 amounted to only 140 ozs. fine. It is stated that the potentialities of the older fields have by no means been exhausted, although a revival of the industry depends on the expenditure of large sums of money, either by the Government or by mining speculators, on developmental work. The bulk of the production came from Fletcher's Gully. A small quantity of alluvial and dollied gold has been obtained at Kurinally, in the Hatches Creek locality, and auriferous country is found in the Kurundi district, near Bonney Well. The metal is also found in the Tanami area, and at the Granites about 63 miles south-east therefrom, but the locality is practically inaccessible in dry seasons.

5. **Remarkable Masses of Gold.**—Allusion has already been made in preceding Year Books to the discovery of "nuggets" and other remarkable masses of gold, but it is not proposed to repeat this information in the present issue. (See Year Book No. 4, page 500.)

6. **Modes of Occurrence of Gold in Australia.**—This subject has been alluded to at some length in earlier issues of the Year Book, but considerations of space will not permit of repetition in the present issue.

7. **Place of Australia in the World's Gold Production.**—In the table given below will be found the estimated value of the world's gold production, and the share of Australia therein during the five years 1922 to 1926. The figures given in the table have been compiled chiefly from returns obtained directly by the Commonwealth Bureau of Census and Statistics from the gold-producing countries of the world.

GOLD.—WORLD'S PRODUCTION, 1922 TO 1926.

Year.	World's Production of Gold.	Gold Produced in Australia.	Percentage of Australia on Total.
	£	£	%
1922	71,653,000	3,545,000	4.9
1923	78,367,000	3,153,000	4.0
1924	87,640,000	3,142,000	3.6
1925	80,739,000	2,375,000	2.9
1926	81,836,718	2,214,401	2.7

The value of the gold yield in the ten chief producing countries during each of the five years 1922 to 1926 is given in the table hereunder. Particulars of the quantity and value of the gold production for all countries for the ten years 1917–26 will be found in the Bulletin of Australian Production issued by this Bureau.

GOLD.—PRODUCTION, CHIEF COUNTRIES, 1922 TO 1926.

Country.	1922.	1923.	1924.	1925.	1926.
	£	£	£	£	£
Union of South Africa	32,895,000	40,480,000	44,534,000	40,768,000	42,285,000
United States ..	10,743,000	10,736,000	11,378,000	9,854,000	9,569,000
Canada	5,929,000	5,457,000	7,095,000	7,373,000	7,451,482
Australia	3,545,000	3,153,000	3,142,000	2,375,000	2,214,000
Mexico	3,512,000	3,437,000	3,686,000	3,351,000	3,282,000
Rhodesia	3,063,000	2,865,000	2,920,000	2,470,000	2,521,000
India	1,832,000	1,697,000	1,843,000	1,673,000	1,632,000
Colombia	1,201,000	1,220,000	450,000	325,000	321,000
Japan	1,239,000	1,154,000	1,177,000	1,189,000	1,285,000
Gold Coast ..	998,000	883,000	958,000	844,000	848,000
Russia	942,000	1,381,000	4,456,000	4,507,000	4,214,000

It has been deemed advisable to apportion values in accordance with Australian currency, *i.e.*, at £4 13s. 10¼d. for 1922, £4 8s. 5¾d. for 1923, £4 13s. 0¼d. for 1924, and £4 4s. 11$\frac{5}{11}$d. for 1925 and 1926.

The next table shows the average yearly value in order of importance of the yield in the chief gold-producing countries for the decennium 1917–1926.

GOLD.—AVERAGE ANNUAL PRODUCTION, CHIEF COUNTRIES, 1917 TO 1926.

Country.	Value.	Country.	Value.
	£		£
Union of South Africa ..	40,657,000	Russia	2,400,000
United States	12,377,000	India	1,995,000
Canada	5,255,000	Japan	1,261,000
Australia	4,080,000	Gold Coast	1,117,000
Mexico	3,559,000	Colombia	1,011,000
Rhodesia	2,931,000		

The comparison has been restricted to countries where the average for the period is in excess of a million sterling.

8. **Employment in Gold Mining.**—The number of persons engaged in gold mining in each State in 1901 and during each of the last five years is shown in the following table :—

GOLD MINING.—PERSONS EMPLOYED, 1901, AND 1922 TO 1926.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Total.
	No.	No.	No.	No.	No.	No.	No.	No.
1901 ..	12,064	27,387	9,438	1,000	19,771	1,112	200	70,972
1922 ..	1,197	3,310	767	40	5,787	106	12	11,219
1923 ..	1,141	2,982	603	32	5,555	119	30	10,462
1924 ..	1,014	2,651	452	30	5,296	128	18	9,589
1925 ..	831	2,353	347	34	5,009	103	32	8,709
1926 ..	806	1,967	321	26	4,488	107	26	7,741

The heavy decline noticeable since 1901 is of course due to the exhaustion of accessible payable deposits and the failure to locate any considerable fresh sources of supply.

§ 3. Platinum and Platinoid Metals.

1. **Platinum.**—(i) *New South Wales.* The deposits at present worked in the State are situated at Platina in the Fifield division, near Parkes, and the production in 1926 amounted to 397 ozs., valued at £6,910, as compared with 573 ozs., valued at £11,061 in the preceding year, while the total production recorded to the end of 1926 amounted to 18,220 ozs., valued at £109,626. The local price for the metal at the end of the year was £17 an ounce. During the year 1927 the Geological Survey proposed to put down a series of bores and shafts with a view to further prospect the field.

(ii) *Victoria.* In Gippsland the metal has been found in association with copper, and 127 ozs. were produced in 1913, but there was no production in recent years.

(iii) *Queensland.* Platinum associated with osmiridium has been found in the beach sands between Southport and Currumbin, in creeks on the Russell goldfield near Innisfail, and in alluvial deposits on the Gympie gold-field, but no production has been recorded.

2. **Osmium, Iridium, etc.**—(i) *New South Wales.* Small quantities of osmium, iridium, and rhodium are found in various localities. Platinum, associated with iridium and osmium, has been found in the washings from the Aberfoil River, about 15 miles from Oban; on the beach sands of the northern coast; in the gem sand at Bingara, Mudgee, Bathurst, and other places. In some cases, as for example in the beach sands of Ballina, the osmiridium and other platinoid metals amount to as much as 40 per cent. of the platinum, or about 28 per cent. of the whole metallic content.

(ii) *Victoria.* In Victoria, iridosmine has been found near Foster, and at Waratah Range, South Gippsland.

(iii) *Tasmania.* For many years osmiridium has been known to exist in the bed of the Savage River, on the West Coast, and in rivulets and creeks in the serpentine country. The first recorded production was in 1910, when 120 ozs., valued at £530, or £4 8s 4d. per oz., were raised. In 1914 the yield had increased to 1,019 ozs., valued at £10,076, or nearly £9 18s. per oz. From 1915 to 1917 the amount raised fell off considerably, owing to difficulty in disposing of the metal, but in 1918 there was an increase to 1,607 ozs., valued at £44,833; while in 1920 the 2,009 ozs. produced returned £77,114, or over £38 7s. 8d. per oz. In October of that year as much as £42 per oz. was obtained. For 1921 the production was 1,751 ozs., valued at £42,935, or about £24 10s. per oz. The output in 1925 was 3,366 ozs., valued at £103,570, or over £30 15s. per oz. Towards the middle of that year the discovery of rich alluvial wash on the Adams River in the south-west of the State led to a "rush," and within a few months over 1,000 men were on the field. As in the case with other fields in Tasmania the osmiridium is shed from serpentine derived from bronzitite rocks, and the claims worked in 1925 were all alluvial. In 1926 the output was 3,173 ozs., valued at £61,908, the heavy decline as compared with 1925 being due to the slump in prices which averaged £23 10s. in the first quarter, and dropped to £11 7s. in the last quarter of 1926. Attempts to bring about a stabilization of the market met with little success.

§ 4. Silver and Lead.

1. **Occurrence in Each State.**—Particulars regarding the occurrence of silver in each State will be found in preceding Year Books, Nos. 1 to 5, but considerations of space preclude the repetition of this matter in the present volume.

2. **Development of Silver Mining.**—The value of the production of silver, silver-lead and ore, and lead from each State during the five years ending 1926 is given hereunder :—

SILVER AND LEAD.—PRODUCTION, 1922 TO 1926.

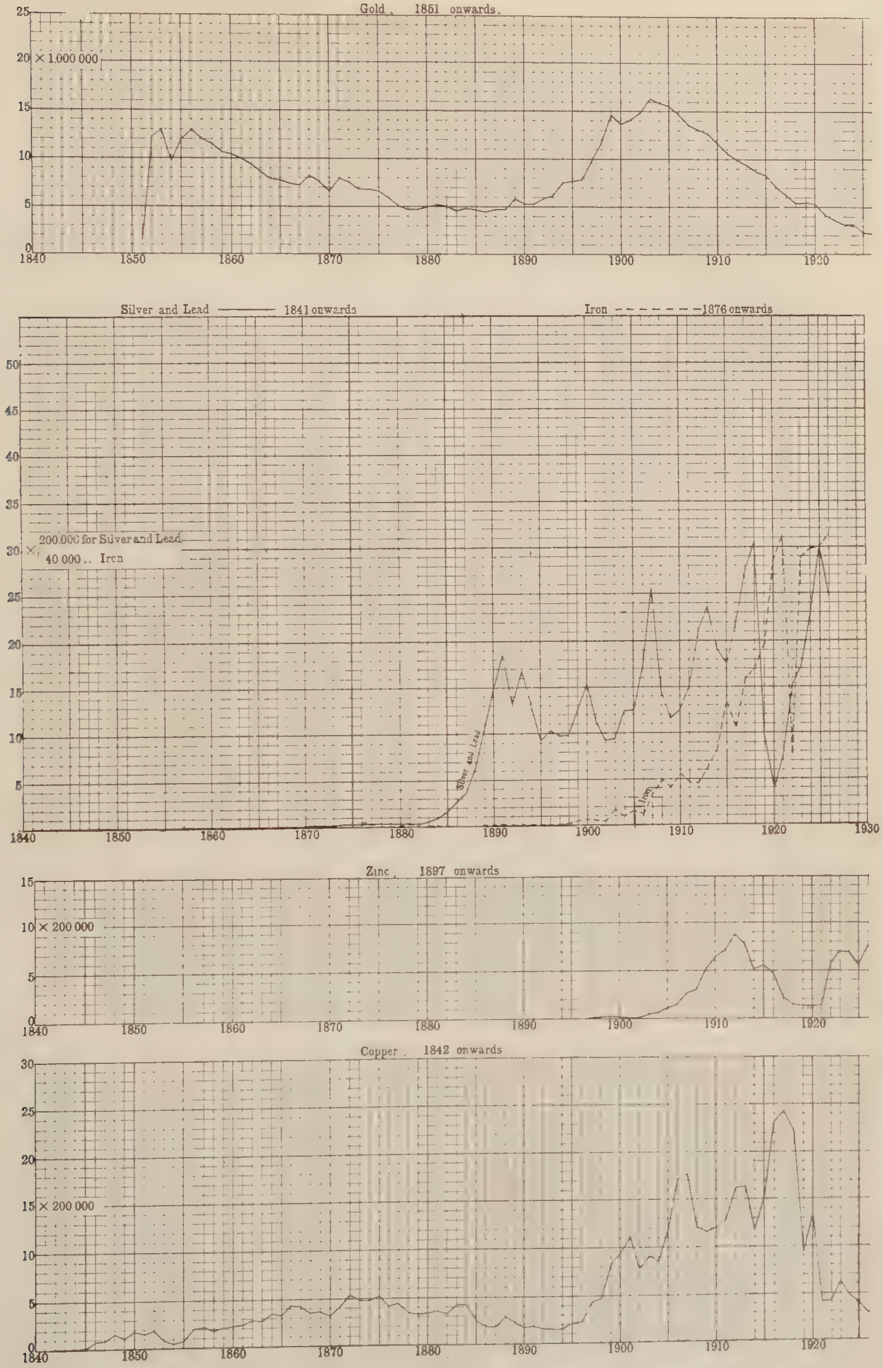
Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Australia.
	£	£	£	£	£	£	£	£
1922 ..	2,574,108	1,080	109,350	377	87,692	241,694	..	3,014,301
1923 ..	2,956,862	963	216,645	60	60,061	218,881	..	3,453,472
1924 ..	4,310,360	645	167,469	373	96,504	252,718	..	4,828,069
1925 ..	5,320,976	291	240,684	1,655	114,961	302,961	(*a*) 617	5,982,145
1926 ..	4,399,953	307	147,724	865	85,604	281,155	(*a*) 447	4,916,055

(*a*) Year ended 30th June.

Production in New South Wales during 1924 was greatly stimulated by the favourable price of the metals, and with the exception of the Central mine, where work was restricted to fire-fighting, the chief mines on the Broken Hill lode were in full operation. Renewed activity resulted from the high prices of lead and zinc in 1925, when the Central mine rejoined the list of producers, the fire areas having been isolated by water curtains on the various levels as required. The decline in value recorded in 1926 was due to the fall in the average prices of lead and spelter during the year.

It must be understood that the totals for New South Wales in the above table represent the *net* value of the product (excluding zinc) of the silver-lead mines of the State. In

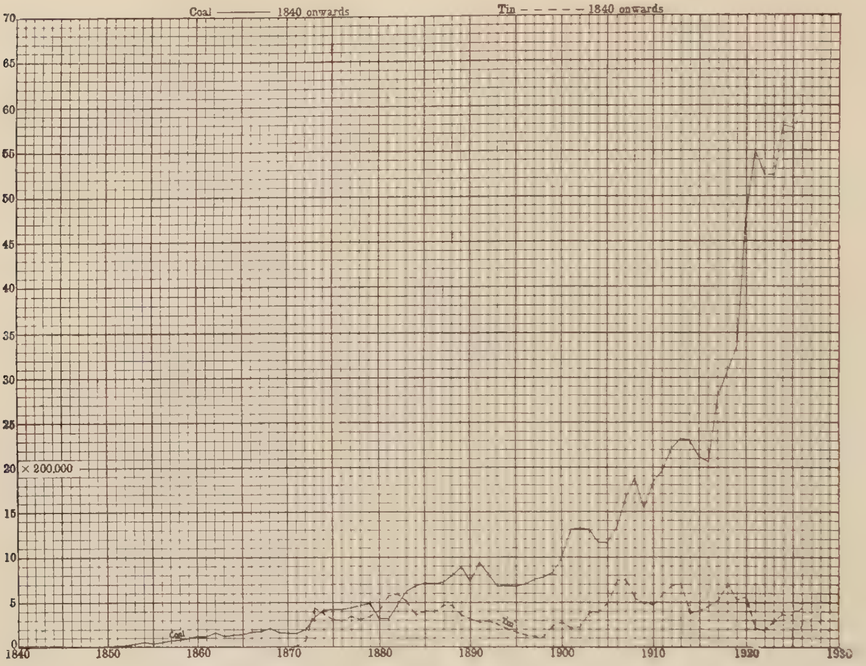
VALUES OF THE PRINCIPAL MINERALS PRODUCED—AUSTRALIA, 1840 TO 1926

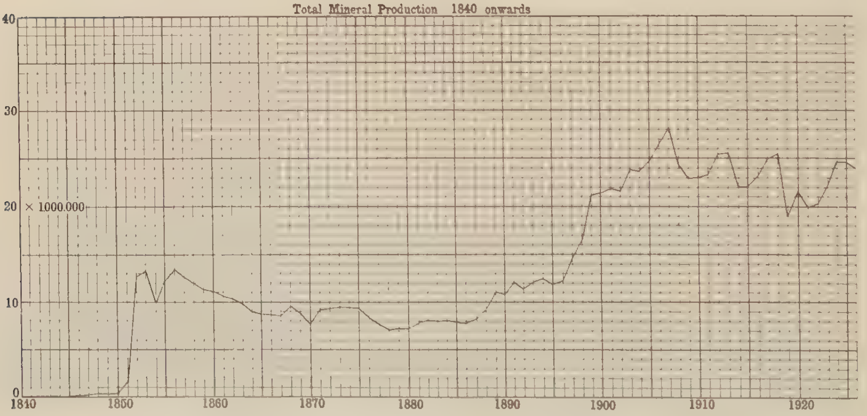


EXPLANATION.—The values shown are those of the total Australian production of certain of the most important minerals in successive years from 1840 onwards.

The base of each small square represents an interval of one year, and the vertical height represents in the case of gold £1,000,000; in the case of silver and lead, zinc and copper £200,000; and in the case of iron, £40,000.

VALUES OF PRINCIPAL MINERALS PRODUCED—AUSTRALIA, 1840 TO 1926—*continued.*





EXPLANATION.—The values shown are those of the total Australian production of certain of the most important minerals in successive years from 1840 onwards.

The base of each small square represents an interval of one year, and the vertical height represents in the case of coal and tin £200,000, and in the case of total mineral production £1,000,000.

explanation of the values thus given, it may be noted that the metallic contents of the larger portion of the output from the silver-lead mines in the State are extracted outside New South Wales, and the Mines Department considers, therefore, that the State should not take full credit for the finished product. The real importance of the State as a producer of silver, lead, and zinc is thus to some extent lost sight of. The next table, however, which indicates the quantity of these metals locally produced, and the average contents by assay of concentrates exported during the last five years, will show, as regards New South Wales, the estimated total production and the value accruing to Australia from the three metals :—

SILVER-LEAD MINES.—NEW SOUTH WALES, TOTAL PRODUCTION, 1922 TO 1926.

Year.	Metal Produced within Australia.				Contents of Concentrates Exported.			
	Silver.	Lead.	Zinc.	Value.	Silver.	Lead.	Zinc.	Value.
	ozs. fine.	tons.	tons.	£	ozs. fine.	tons.	tons.	£
1922	6,648,825	97,867	23,724	4,113,427	3,264,102	19,328	132,186	1,272,074
1923	7,233,236	124,570	41,153	5,707,739	4,834,718	40,906	149,319	1,813,287
1924	6,292,978	120,380	43,579	6,472,812	2,963,693	21,513	114,374	1,292,220
1925	7,437,967	139,839	39,991	7,539,130	1,782,193	30,752	75,435	1,371,183
1926	7,338,477	142,654	39,277	6,730,689	2,371,264	23,242	96,167	1,591,673

The figures given above are quoted on the authority of the Mines Department of New South Wales. During the later years considerable quantities of cadmium were also produced.

3. Sources of Production.—Broken Hill, in New South Wales, is the chief centre of silver production in Australia.

(i) *New South Wales.* (*a*) *Broken Hill.* A description of the silver-bearing area in this district is given in earlier issues of the Year Book. During 1913 the output of ore raised amounted to 1,744,000 tons, the highest recorded in the history of the field. For the four years 1915 to 1918 the production averaged over 1,200,000 tons, but, owing to the cessation of operations through industrial troubles and the fall in the price of metals there was a decline in 1919 to 415,400 tons, and in 1920, when operations were carried on for a few weeks only, to 38,661 tons. Thenceforward there was a continuous increase, and in 1926 the tonnage raised amounted to 1,296,750, of which 1,279,462 tons consisted of sulphides, and 17,288 tons of carbonate and siliceous ores. The major portion of the latter is sent for treatment to Port Pirie in South Australia, while the remaining ore is concentrated on the field, and the silver-lead concentrates are forwarded to Port Pirie for smelting and refining. Portion of the zinc concentrates produced is treated at the Electrolytic Zinc Company's works at Risdon in Tasmania, and the balance is sent overseas.

Although the returns are not complete in all cases, the following table relating to the companies controlling the principal mines at Broken Hill will give some idea of the richness of the field :—

SILVER.—BROKEN HILL RETURNS TO END OF 1926.

Mine.	Value of Output to end of 1926.	Dividends and Bonuses Paid to end of 1926.
	£	£
Broken Hill Proprietary Co. Ltd.	52,133,719	12,983,320
Broken Hill Proprietary Block 14 Co. Ltd.	4,535,323	653,660
British Australian Broken Hill Co. Ltd.	5,858,998	821,280
Broken Hill Proprietary Block 10 Co. Ltd.	4,946,989	1,432,500
Sulphide Corporation Ltd. (Central and Junction Mines)	24,287,230	3,024,375
Broken Hill South Ltd.	18,010,114	4,215,000
North Broken Hill Ltd.	12,758,719	3,968,940
Broken Hill Junction Lead Mining Co.	1,185,058	87,500
Junction North Broken Hill Mine	3,323,646	171,431
The Zinc Corporation Ltd.	6,381,540	2,364.972
Barrier South Ltd.	151,517	50,000
Totals	133,572,853	29,772,978

The returns relating to dividends and bonuses paid are exclusive of £1,744,000 representing the nominal value of shares in Block 14, British, and Block 10 companies, allotted to shareholders of Broken Hill Proprietary Company. If the output of the companies engaged in treating the tailings, etc., be taken into consideration, the totals for output and dividends shown in the table would be increased to about 141 millions and 33 millions respectively. The authorized capital of the various companies amounted to £6,823,000.

(*b*) *Picton Division.* The mines in the Yerranderie area produced 1,856 tons of ore in 1926, yielding 95,021 ozs. of silver, besides 412 ozs. of gold, and 419 tons of lead, the total production being valued at £26,115. Of the yield from this area in 1926, the production from the Wollondilly mine was valued at £6,552.

(*c*) *Other Areas.* Small quantities of ore were raised during the year from the Moruya, Mudgee, Tuena and Yass divisions.

(ii) *Victoria.* The silver produced in 1926 amounted to 2,373 ozs. of concentrates, valued at £307, and was obtained in the refining of gold at the Melbourne Mint.

(iii) *Queensland.* The yields from the chief silver and lead producing centres in 1926 were as follows:—Chillagoe, silver £13,783, lead £58,651; Herberton, silver £12,315, lead £33,580; Etheridge, silver £3,437, lead £15,767; and Cloncurry, silver £1,110, lead £2,372. Some of the mining leases in the Chillagoe area are owned by the State. The Mount Isa silver-lead field in the Cloncurry district was discovered in 1923, and the lodes so far opened are distributed over a length of 5 miles by a width of one mile along the west bank of the West Leichhardt River. Large accumulations of high grade carbonate of lead are in sight on this field, which, according to experts, is the largest find in importance since the discovery of Broken Hill. During the years 1925 and 1926 good progress was made with developmental work.

(iv) *South Australia.* Silver ore has been discovered at Miltalie and Poonana, in the Franklin Harbour district, also at Mount Malvern and Olivaster, near Rapid Bay, and in the vicinity of Blinman and Farina, at Baratta, and elsewhere. The production of silver in 1926 was valued at £46, and of silver-lead ore at £819.

(v) *Western Australia.* The quantity of silver obtained as a by-product and exported in 1926 was 68,413 ozs., valued at £8,863. In addition, 4,162 tons of lead and silver-lead ore and concentrates valued at £76,741 were exported. The production of lead ore from the Northampton mineral field amounted in 1926 to 23,973 tons.

(vi) *Tasmania.* The silver produced in 1926 amounted to 766,653 ozs., valued at £97,988, and the lead to 5,893 tons, valued at £183,167. Of the silver the chief producers were the Hercules-Rosebery, with 262,010 ozs., the North Mt. Farrell with 173,295 ozs., and the Mt Lyell with 134,516 ozs. From the first mentioned, the silver was produced from zinc lead ore, while the Mt. Lyell product was obtained from copper ore. The principal producers of lead were the Hercules-Rosebery and North Mt. Farrell in the Western division, with 2,184 tons and 1,790 tons respectively, the Magnet mines with 1,011 tons in the North West, and Round Hill, with 395 tons, in the Dundas area.

(vii) *Northern Territory.* Silver-lead ores are found near Pine Creek, and at Mount Shoebridge near Brock's Creek railway station. There are a number of fair-sized galena lodes in the Pine Creek and McArthur River districts, but, owing to costs of transport and realization little attention is devoted to them. No mining for this class of mineral took place in 1926, the small production recorded having been obtained from the dumps of the Evelyn silver-lead and zinc mines which were closed down in the year 1890. About 10 tons of galena were raised on the Fergusson River, near Hidden Valley.

4. **World's Production.**—The world's production of silver during the last five years for which particulars are available is estimated to have been as follows :—

SILVER.—WORLD'S PRODUCTION, 1922–1926.

Total.	1922.	1923.	1924.	1925.	1926.
World's production in 1,000 fine ozs.	213,541	243,265	239,107	245,186	251,797

The share of Australia in the world's silver production in 1919 was estimated at 7,800,000 ozs., or about 4½ per cent. on the total production, but in 1921, owing to the cessation of operations at the Broken Hill field, the total local extraction fell to 4,573,000 ozs., and the estimated silver contents of the ores, bullion, and concentrates exported to 732,000 ozs., the total being a little over 3 per cent. on the world's production. For 1926 local extraction was set down as 8,946,000 ozs., and exports as 1,397,000 ozs., the total being equivalent to a little over 4 per cent. on production for the world. The figures for the world's production are given on the authority of *The Mineral Industry.*

Arranged in order of importance the estimated yields in 1926 from the chief silver producing countries were as follows :—

SILVER.—PRODUCTION, CHIEF COUNTRIES, 1926.

Country.	Production.	Country.	Production.
	Fine ozs. ('000 omitted.)		Fine ozs. ('000 omitted.)
Mexico	98,000	British India	5,000
United States	62,029	Central America	3,000
South America	30,000	East Indies	2,500
Canada	22,436	Transvaal	1,200
Australia	**10,343**	China	190
Europe	10,000	Rhodesia	160
Japan	6,000		

5. **Prices.**—As the production of silver is dependent to a very large extent on the price realized, a statement of the average price per standard ounce in the London market during the last five years is given below :—

SILVER.—PRICES, 1922 TO 1926.

Price.	1922.	1923.	1924.	1925.	1926.
Pence per standard oz. ..	34.41	31.93	33.97	32.09	28.69

The average price in cents per fine ounce in New York fell from 69.07 in 1925 to 62.11 in 1926. Apparently the decline in 1926 was due to the circumstance that the bear element gained control of a weak market. Chinese and Indian speculators sold largely for a time, and from the latter part of September until the third week in October the market was demoralized. Continental selling in October, chiefly in connexion with the Bank of France, also contributed to the final stages of the decline.

6. Employment in Silver Mining.—The number of persons employed in silver mining during each of the last five years is given below :—

SILVER MINING.—PERSONS EMPLOYED, 1922 TO 1926.

Year.	N.S.W. (a)	Q'land.	W. Aust.	Tasmania.	Nor. Ter.	Australia.
	No.	No.	No.	No.	No.	No.
1922	4,712	321	(b) 152	495	..	(c) 5,686
1923	5,155	133	(b) 96	510	..	5,894
1924	5,468	759	(b) 141	479	15	(d) 6,874
1925	5,770	590	(b) 204	579	4	(e) 7,166
1926	5,924	390	(b) 138	523	2	(f) 7,002

(a) Silver, lead, and zinc. (b) Principally lead ore. (c) Including 6 in South Australia. (d) Including 12 in South Australia. (e) Including 19 in South Australia. (f) Including 25 in South Australia.

The bulk of the employment up to 1924, when Queensland assumed importance, was in New South Wales and Tasmania, the quantity of silver raised in the other States being unimportant.

§ 5. Copper.

1. **Production.**—The production of copper in the various States has been influenced considerably by the ruling prices, which have undergone extraordinary fluctuations. The quantity and value of the local production as reported and credited to the mineral industry for the years 1922 to 1926 are shown in the following table :—

COPPER.—PRODUCTION, 1922 TO 1926.

State.		1922.	1923.	1924.	1925.	1926.
QUANTITY.						
		Tons.	Tons.	Tons.	Tons.	Tons.
New South Wales	Ingot and Matte	575	1,182	1,129	478	357
	Ore	50	79	..	..	..
Queensland	Ingot and Matte	5,104	6,243	5,630	3,909	1,217
	Ore	..	..	..	..	..
South Australia	Ingot and Matte	1,185	3,523	405	570	232
	Ore	..	..	..	..	..
Western Australia	Ingot and Matte	660	1,057	..	..	1
	Ore	352	3,394	2,795	1,201	..
Tasmania	Ingot and Matte	5,616	6,065	6,698	6,539	6,915
	Ore	..	..	..	..	..
Northern Territory	Ingot and Matte	..	..	..	..	..
	Ore	(a) 58	..	(a) 32	(a) 4	(a) 7
VALUE.						
		£	£	£	£	£
New South Wales		36,233	82,375	71,658	30,215	22,473
Queensland		321,535	430,746	380,025	254,074	73,591
South Australia		73,646	232,172	26,046	35,878	14,681
Western Australia		20,379	65,100	40,676	18,200	84
Tasmania		391,535	435,413	457,386	436,661	454,854
Northern Territory ..		(a) 798	(a) 30	(a) 239	(a) 15	(a) 60
Australia		844,126	1,245,836	976,030	775,043	565,743

(a) Year ended 30th June.

The total value of the production in 1920 was £2,658,000, and the heavy fall during recent years was due to the low price of the metal preventing the profitable working of many of the copper mines throughout Australia.

2. Sources of Production.—(i) *New South Wales.* The depression in this branch of the mining industry during the last few years is likely to continue, unless copper appreciates in value, and less costly methods of production are evolved. Practically the only mines in operation were the Mt. Royal group at Tottenham, the Budgery mine at Hermidale, and the Copper Hill mine at Molong. In addition to the 357 tons of (electrolytic) copper shown in the table, about 700 tons of the metal were obtained at the Port Pirie smelters from Broken Hill silver-lead-zinc ores, and a small quantity was contained in the silver-lead concentrates exported overseas.

(ii) *Queensland.* The yield in this State amounted in 1926 to 1,217 tons valued at £73,591, and shows a serious decline as compared with 1920 when nearly 16,000 tons valued at £1,552,000 were raised. The falling-off in the yield in recent years was due partly to the low prices realized for copper and partly to old-fashioned plant and methods of treatment. Returns from the chief producing areas in 1926 were as follows :—Cloncurry, 1,098 tons, £66,444 ; and Chillagoe, 90 tons, £5,415. These yields naturally compare very unfavourably with those of 1920. The Cloncurry district—reckoned the richest and most extensive cupriferous area in Australia—which under normal circumstances produces more than half the copper output of the State, returned a yield of 1,098 tons, as against 7,640 tons in 1920. Mount Morgan, which in 1925 contributed a yield of 2,634 tons, valued at £171,242, did not figure in the returns for 1926.

(iii) *South Australia.* Taking the entire period over which production extended, the yield of copper in South Australia easily outstrips that of any other State. In recent years, however, Queensland, Tasmania, and New South Wales have come to the front as copper producers, as the table on the preceding page shows. Deposits of copper ore are found over a large portion of South Australia. A short account of the discovery, etc., of some of the principal mining areas, such as Kapunda, Burra Burra, Wallaroo, and Moonta, was given in earlier issues of the Official Year Book. In 1926 the production amounted to 232 tons, valued at £14,681, as compared with 7,213 tons, valued at over £902,000 in 1917.

(iv) *Western Australia.* The value of the copper exported from this State in 1926 was only £84 as compared with £18,200 in 1925, the absence of production in 1927 being due to the low price ruling for the metal.

(v) *Tasmania.* The quantity of copper produced in Tasmania during 1926 was 6,915 tons, valued at £454,854, the whole of the production being due to the Mount Lyell Mining and Railway Co. Ltd. This Company treated 44,856 tons of ore and concentrates and produced 6,980 tons of blister copper, containing copper, 6,915 tons ; silver, 134,587 ozs. ; and gold, 2,306 ozs. ; the whole being valued at £481,846. The employees in 1926 numbered 952, of whom 481 were in the mining branch, 386 were engaged in the reduction works, and 85 in the railway department. Current for power and lighting is obtained from the Lake Margaret hydro-electric plant which also supplies the municipal requirements of Queenstown and Gormanston, and the Company's sub-station at Zeehan. Recognizing the fluctuating character of the returns from copper mining, and keeping in view the possibility of future exhaustion of the deposits, the directors wisely endeavoured to give permanence to the enterprise by investing portion of the profits in industrial undertakings, such as the manufacture of superphosphates and other chemical products. Success was early achieved, and this branch of the Company's business yields highly satisfactory returns. To the end of 1926 this Company had paid upwards of £4,442,000 in dividends.

(vi) *Northern Territory.* Copper has been found at various places, but lack of capital and difficulty of transport prevent the development of the deposits. In 1926, the production was returned at 7 tons of ore, valued at £60, obtained near Kilgour gorge in the Borroloola district.

3. **Prices.**—The great variation in price that the metal has undergone is shown in the following table, which gives the average price in London and New York during each of the last five years. The figures are given on the authority of the *The Mineral Industry.*

COPPER.—PRICES, 1922 TO 1926.

Year.	Average London Price per Ton Standard Copper.	Average New York Price in Cents per lb. Electrolytic Copper.
	£	Cents.
1922	62.12	13.38
1923	65.84	14.42
1924	63.15	13.02
1925	61.92	14.04
1926	57.97	13.80

As evidence of the tremendous monthly variation in the price of copper it may be noted that in December, 1916, the average London price of standard copper was £145.32 per ton, while in May, 1926, it was quoted at £56.49. In 1926 the highest price was £59.67, recorded in February.

4. **World's Production of Copper.**—The world's production of copper during the five years 1922 to 1926, is estimated to have been as follows. The figures for foreign countries have been taken from the latest issue of *The Mineral Industry*, and differ somewhat from those quoted in the previous issue :—

COPPER.—WORLD'S PRODUCTION, 1922 TO 1926.

Year	1922.	1923.	1924.	1925.	1926.
World's production—tons ..	867,000	1,245,700	1,366,700	1,434,700	1,469,500

The yields from the chief copper-producing countries in 1926 were as follows :—

COPPER.—PRODUCTION, CHIEF COUNTRIES, 1926.

Country.	Production.	Country.	Production.
	Tons.		Tons.
United States	776,600	**Australia**	**12,300**
Chile	199,100	Norway	12,300
Africa	96,400	Russia	11,800
Japan	64,500	Cuba	11,600
Canada	57,300	Jugo-Slavia	9,600
Spain and Portugal ..	57,100	Bolivia	6,300
Mexico	55,600	Austria	3,600
Peru	38,100	Sweden	2,100
Germany	21,300		

The Australian production in 1926 amounted to under 1 per cent. of the total.

During the year 1926 more than half the world's copper output was produced by the United States. A cartel known as Copper Exporters Incorporated formed there in that year controls about 90 per cent. of the world's production of the metal.

5. **Employment in Copper Mining.**—The number of persons employed in copper mining during each of the last five years was as follows :—

COPPER MINING.—PERSONS EMPLOYED, 1922 TO 1926.

Year.	N.S.W.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Ter.	Australia.
	No.	No.	No.	No.	No.	No.	No.
1922	66	882	70	10	948	6	1,982
1923	85	1,176	420	80	1,066	3	2,830
1924	52	1,017	34	110	532	12	1,757
1925	47	878	55	34	743	6	1,763
1926	31	270	26	8	697	..	1,032

§ 6. Tin.

1. **Production.**—The development of tin mining is, of course, largely dependent on the price realized for the metal, and, as in the case of copper, the production has been subject to somewhat violent fluctuations. The tables below show the quantity and value of the production as reported to the Mines Departments in each of the States during the five years 1922 to 1926 :—

TIN.—PRODUCTION, 1922 TO 1926.

State.		1922.	1923.	1924.	1925.	1926.
QUANTITY.						
		Tons.	Tons.	Tons.	Tons.	Tons.
New South Wales ..	Ingots	734	896	1,041	957	1,134
	Ore ..	410	..	..	..	..
Victoria	Ingots	..	..	..	..	..
	Ore	115	78	38	69	29
Queensland	Ingots	(a)	(a)	(a)	(a)	(a)
	Ore	1,098	903	1,196	1,012	1,058
Western Australia ..	Ingots	..	..	..	..	..
	Ore ..	110	131	87	108	67
Tasmania	Ingots	679	1,160	1,108	1,130	1,096
	Ore ..	..	..	..	..	..
Northern Territory ..	Ore ..	(b) 79	(b) 136	(b) 97	(b) 110	(b) 98
VALUE.						
		£	£	£	£	£
New South Wales ..	..	154,698	180,789	259,485	250,944	326,474
Victoria	..	12,071	10,371	6,056	11,592	5,075
Queensland	..	99,758	114,945	175,509	161,500	174,147
Western Australia ..	..	10,930	15,095	12,008	15,392	10,450
Tasmania	..	112,407	236,955	275,014	297,515	322,526
Northern Territory ..	..	(b) 5,891	(b) 13,887	(b) 12,855	(b) 15,966	(b) 15,852
Total	..	395,755	572,042	740,927	752,909	854,524

(a) Included with ore. (b) Year ending 30th June.

The rise in the price of tin during the period covered by the table is reflected in the increased value of production. In 1922, the average London price was £159 9s. per ton, while in 1926 it had advanced to £291 2s. per ton.

2. Sources of Production.—(i) *New South Wales.* Tin-mining operations were stimulated by the high price of the metal in 1926, and renewed activity was manifested in the New England and Ardlethan districts, where the principal tin fields are situated. Operations on the northern areas were, however, somewhat hampered by shortage of water. A large proportion of the output in New South Wales is obtained by dredging, the quantity so won in 1926 being 814 tons, valued at £157,476. Forty-three dredges were in operation during the year. In the Tingha division of the Peel and Uralla district the yield amounted to 473 tons, valued at £91,534. The Emmaville division in the New England district showed a yield of 402 tons, valued at £71,453. In the Wilson's Downfall division, 58 tons, valued at £11,710, were raised. From the Torrington division, 150 tons, valued at £27,525, were returned. The Ardlethan field, in the Lachlan division, produced 362 tons of concentrates, valued at £57,760, while Torrington returned 124 tons, valued at £22,580.

(ii) *Victoria.* The production in 1926 was obtained by dredging, the Cock's Pioneer Gold and Tin Co. in the Beechworth district contributing the whole of the output which amounted to 29 tons.

(iii) *Queensland.* The chief producing districts in Queensland during 1926 were Herberton, 571 tons, valued at £94,504; Kangaroo Hills, 222 tons, £31,546; Stanthorpe, 146 tons, £27,180; Cooktown, 41 tons, £7,578; and Chillagoe, 74 tons, £12,769. Despite the satisfactory prices realized in 1926, the total production valued at £174,000 was much below that of 1920, when the yield was valued at £252,000. Improved methods of production, coupled with more vigorous prospecting will, it is hoped, result in improved returns in future years.

(iv) *Western Australia.* The export of tin from the State during 1926 amounted to 67 tons, valued at £10,450. The production from the Greenbushes field amounted to 61 tons of black tin, valued at £10,126, and from the Pilbara field 35 tons, valued at £5,446. Deposits of tin occur in widely-separated localities in the Kimberley division, the Thomas River in the Gascoyne Valley, and at Poona on the Murchison gold-field.

(v) *Tasmania.* During 1926 the output of tin amounted to 1,096 tons, valued at £322,526, the principal producers being the Briseis, Endurance, Pioneer, and Mt. Bischoff mines. The increased price of the metal led to renewed activity and there is every prospect of larger yields in the near future.

(vi) *Northern Territory.* The yield of tin concentrates in 1926 amounted to 98 tons, valued at £15,852, of which 36 tons were raised at Marranboy, 29 tons at Mt. Wells, and 13 tons at Hayes Creek, while small quantities were raised at Hidden Valley, Collia, and Muldiva, and elsewhere. About 15 tons of concentrates were produced from alluvial tin, half of which came from the Pine Creek and Umbrawarra localities where it was obtained mainly by Chinese fossickers.

3. World's Production.—According to *The Mineral Industry* the world's production of tin during each of the last five years was as follows. The figures for previous years have been amended since last issue.

TIN.—WORLD'S PRODUCTION, 1922 TO 1926.

1922.	1923.	1924.	1925.	1926.
Tons.	Tons.	Tons.	Tons.	Tons.
130,344	130,254	140,447	144,761	143,968

The yields from the chief producing countries in 1926 were as follows :—

TIN.—PRODUCTION, CHIEF COUNTRIES, 1926.

Country.	Production.	Country.	Production.
	Tons.		Tons.
Federated Malay States ..	45,900	Australia	(a) 3,200
Netherlands East Indies ..	33,000	Great Britain	2,900
Bolivia	32,100	Unfederated Malay States	2,200
Nigeria	7,000	Congo	1,700
Siam	7,000	India	1,300
China	6,500	South Africa	1,100

(a) As quoted by Australian Mines and Metals Association.

Based on the results for the last three years, Australia's share of the world's tin production would appear to be about 2.2 per cent.

4. **Prices.**—The average price of the metal in the London market for the years 1922 to 1926 was as follows :—

TIN.—PRICES, 1922 TO 1926.

Year.	Average Price per Ton.	Year.	Average Price per Ton.
	£ s. d.		£ s. d.
1922..	159 9 0	1925	261 1 6
1923..	202 5 0	1926	291 2 0
1924..	248 14 10		

The large and continuous advances in price since 1922 are due to the fact that the growing demand for the metal for industrial uses has not been offset by the emergence of outstanding new sources of production. In 1926 the lowest price reached was in the early part of June, when the coal strike depressed the market in sympathy with all other branches of business, while the highest price was reached in October, when £321 was realized. Monthly averages for the year 1926 ranged from £272 per ton in June to £300 5s. in December.

5. **Employment in Tin Mining.**—The number of persons employed in tin mining during the last five years is shown below :—

TIN MINING.—PERSONS EMPLOYED, 1922 TO 1926.

Year.	N.S.W.	Victoria.	Q'land.	W. Aust.	Tas.	Nor. Ter.	Australia.
	No.	No.	No.	No.	No.	No.	No.
1922	1,090	13	659	31	620	120	2,533
1923	1,047	7	703	35	842	170	2,804
1924	1,004	2	698	40	781	115	2,640
1925	1,012	(a)	653	55	1,035	118	(b)2,875
1926	1,235	(a)	714	78	1,057	112	3,196

(a) The tin produced in Victoria was raised by a dredging company operating primarily for gold.
(b) Including 2 in South Australia.

§ 7. Zinc.

1. **Production.**—(i) *New South Wales.* (a) *Values Assigned.* The production of zinciferous concentrates is chiefly confined to the Broken Hill district of New South Wales, where zincblende forms one of the chief constituents in the enormous deposits of sulphide ores. During the earlier years of mining activity on this field a considerable amount of zinc was left unrecovered in tailings, but from 1909 onwards improved methods of treatment resulted in the profitable extraction of the zinc contents of the accumulations at the various mines.

As the metallic contents of the bulk of the concentrates, etc., raised in the Broken Hill District are extracted outside New South Wales, the mineral industry of that State is not credited by the Mines Department with the value of the finished product. The figures given hereunder, therefore, refer to the quantity and value of the zinc concentrates actually exported during the years specified.

ZINC.—CONCENTRATES, ETC., EXPORTED FROM NEW SOUTH WALES, 1889 TO 1926.

Year.	Quantity of Zinc Concentrates, etc., Exported.	Value.	Year.	Quantity of Zinc Concentrates, etc., Exported.	Value.
	Tons.	£		Tons.	£
1889	97	988	1923	426,049	1,411,652
1891	219	2,622	1924	353,650	1,296,571
1899	49,879	49,207	1925	226,525	1,022,016
1922	363,681	1,157,458	1926	267,533	1,359,588

(*b*) *Local and Foreign Extraction.* A statement of the quantity of zinc extracted in Australia and the estimated zinc contents of concentrates exported overseas during the five years 1922 to 1926 will be found in § 18 hereinafter.

(ii) *Queensland.* The total production of zinc in 1926 was returned at 200 tons, valued at £6,827, produced from ores raised in the Chillagoe area.

(iii) *South Australia.* Zinc is known to exist in various localities in South Australia, but there has been no production during recent years.

(iv) *Tasmania.* Investigations in regard to the Read-Rosebery zinc-lead deposits in Tasmania have proved the existence of 1,680,000 tons of ore, which, added to an estimated quantity of 915,000 tons of "probable" ore, make a total supply of 2,595,000 tons. During the year 1926 the production from local ores was taken as 5,378 tons, valued at £183,362, the principal producer being the Hercules-Rosebery, with 5,162 tons.

The Electrolytic Zinc Co. at Risdon worked on raw materials obtained partly from the West Coast district of Tasmania, but chiefly from Broken Hill in New South Wales. Production from other than Tasmanian ores in 1926 consisted of 41,836 tons of zinc valued at £1,427,845, and 150 tons of cadmium, valued at £27,746. Over 1,000 men were employed at these works. Satisfactory results were obtained at the Hercules-Rosebery experimental plant, and will doubtless lead to increased exploitation of the large zinciferous area on the West Coast.

2. **Prices.**—During the four years 1911 to 1914, the London price of zinc averaged £23 15s. per ton, ranging fom £21 in 1914 to £26 3s. 4d. in 1912. Owing to the heavy demand and other circumstances arising out of the war, the prices in 1915 and 1916 reached the very high average of £67 11s. 1d. and £72 1s. 5d. per ton respectively. For 1921 the average recorded was £25 16s. 11d.; for 1922, £30; for 1923, £33 1s. 2d.; for 1924, £33 14s. 7d.; for 1925, £36 12s. 6d.; and for 1926, £34 2s. 1d. per ton.

§ 8. Iron.

1. **General.**—The fact that iron-ore is widely distributed in Australia has long been known, and extensive deposits have been discovered from time to time at various places throughout the States, but the utilization of these deposits for the production of iron and steel is, at present, confined to New South Wales.

2. Production.—(i) *New South Wales.* (*a*) *Extent of Deposits.* Iron ores of various composition are found widely distributed throughout the State, but some of the deposits are at present of no commercial importance on account of their small and scattered extent, or by reason of their distance from means of transport. Excluding deposits too far from existing railways, or too small to warrant exploitation, as well as aluminous ores, the quantity of iron ore available by quarrying has been set down as 15 million tons. There is, in addition, a large tonnage available by the more costly method of mining. Altogether it appears probable that the total quantity available for smelting is about 53 million tons. The chief sources of supply during recent years were the deposits at Cadia, in the Orange division, and Tallawang, in the Gulgong division.

(*b*) *Lithgow Iron Works.* Reference to the events leading up to the establishment of ironworks at Lithgow will be found in earlier issues of the Year Book (see No. 3, p. 508). During 1926 the following materials were received at the blast furnaces: Iron ore, 178,746 tons; limestone, 72,636 tons; slag, 4,777 tons; manganese ore, 261 tons; and coke, 157,990 tons. Practically the whole of the ores, fluxes, and fuels used were produced in the State. The iron ore was raised from quarries owned by the Company at Tallawang and Cadia, and the pig iron produced therefrom amounted to 105,201 tons, valued at £578,605. Operations are in progress to test deposits in other areas held by the Company.

The following table shows the quantity and value of pig iron produced in New South Wales during the last five years from locally-raised ores only:—

PIG IRON.—PRODUCTION FROM LOCAL ORES, NEW SOUTH WALES, 1922 TO 1926.

Particulars.		1922.	1923.	1924.	1925.	1926.
Quantity ..	Tons	54,856	94,350	74,075	95,530	105,201
Value	£	248,909	707,625	518,525	525,415	578,605

The figures quoted above refer to production from *local* ores only, and as such credited to the New South Wales mineral industry. They do not, of course, represent the total production of pig iron in New South Wales, since, as shown in the succeeding paragraph, a considerable quantity of ore raised in South Australia, and credited therefore to the mineral returns of that State, is treated in New South Wales.

(*c*) *Newcastle Iron Works.* The Broken Hill Proprietary Company established works for the manufacture of iron and steel on a large scale at Newcastle, and operations were started early in 1915. The Company is utilizing the immense deposit of iron ore at the Iron Knob quarries in South Australia, which are connected with the seaboard at Whyalla, a distance of about 34 miles, by the Company's tramway. The ore quarried for the year ended 30th November, 1927, amounted to 730,780 tons. Extensive limestone works and loading bin at Devonport, Tasmania, as well as quarries in New South Wales for dolomite, magnesite, etc., are also owned by the Company.

The output of pig iron for the year ended 30th November, 1927, amounted to 416,533 tons, and of steel ingots to 387,929 tons. Further details in regard to the activities of these works in 1921 were given on page 347 of Official Year Book No. 15. The steel works possess three blast furnaces of a normal daily producing capacity of 1,300 tons, and a fourth furnace of 100 tons for the production of foundry iron. There are nine 65-ton basic open-hearth furnaces capable of producing 10 to 12,000 tons of ingot steel weekly. The works are supplied with a 35-inch blooming mill for the production of blooms, plates, etc., a 28-inch rolling mill for the manufacture of heavy rails, structural steel, billets, etc., an 18-inch mill for making light rails, structural shapes, fishplates, and heavy sections of merchant bars and billets, a 12-inch mill and an 8-inch mill, each for merchant bars, etc., a continuous rod mill for the production of wire rods, and a fishplate mill. A steel foundry, containing one acid open-hearth furnace, and a cupola furnace for iron castings, with a direct metal foundry which takes the hot metal from the blast furnaces, supply all necessary castings.

The company also possesses 224 by-product coke ovens, and connected with this department are the tar, sulphate of ammonia, and benzol plants.

(*d*) *Port Kembla Iron Works.* A Company with a nominal capital of £5,000,000 has been formed to establish iron and steel works at Port Kembla in the South Coast district. Complete and up-to-date plant has been acquired, and operations will be started at an early date.

(*e*) *Iron Oxide, etc.* A quantity of iron oxide is purchased by the various gasworks for use in purifying gas, and it is also to some extent employed as a pigment, the output in New South Wales being drawn chiefly from the deposits in the Port Macquarie, Moss Vale, Goulburn, and Newcastle Divisions. During 1926 the iron oxide raised amounted to 3,251 tons, valued at £1,958. Since the closing down of the Sulphide Corporation's Works at Cockle Creek in 1922 there has been no production of ironstone for fluxing purposes.

(ii) *Victoria.* Iron ore has been located at various places in Victoria, but without special assistance to the industry there does not seem to be any prospect of the deposits being profitably worked.

(iii) *Queensland.* Queensland possesses some extensive deposits of iron ore, which are mined chiefly for fluxing purposes in connexion with the reduction of gold and copper ores. During the year 1921, 4,061 tons of ironstone flux, valued at £5,976, were raised, the bulk of which came from Iron Island in the Rockhampton district. The production in subsequent years was small until 1926, when 4,412 tons, valued at £3,914 were raised from deposits in the Chillagoe area. It is stated that Queensland possesses within its own borders an abundance of the ore, fuel, and fluxes required for the carrying on of a large ironworks.

(iv) *South Australia.* South Australia possesses some rich deposits of iron ore capable of being mined for an indefinite period. The best known deposit is the Iron Knob, a veritable hill of iron ore of high percentage, situated about 40 miles W.S.W. from Port Augusta. A recent survey places the probable reserves of ore in the Iron Knob and Iron Monarch deposits at 133 million tons, with an average content of 63.64 per cent. iron. The Broken Hill company utilizes ore from this quarry at its ironworks at Newcastle, New South Wales, and the amount raised for the year 1927 was 583,745 tons, valued at £671,307. It is estimated that the deposits in the Middleback Range contain 32 million tons of slightly higher grade ore than that at the Iron Knob.

(v) *Western Australia.* This State has some very rich deposits of iron ore, but, owing to their geographical position, the most extensive fields at the present time are practically unexploited, the production in the State being confined chiefly to that needed for fluxing purposes. Allusion to the extent of these deposits will be found in previous Year Books. (See No. 20, page 747.) There is a possibility that the extensive deposits at Yampi Sound will be exploited at an early date with British capital.

(vi) *Tasmania.*—In Official Year Book No. 19, p. 742, some account was given of the position and magnitude of the deposits of iron ore in Tasmania, and it was pointed out that the quantity of ore available was estimated at 100 million tons. During the year 1908 about 3,600 tons of ore were raised, but there was no subsequent record of production. Exploitation of the deposits is at present dependent on the demand from the mainland.

(vii) *Northern Territory.* Large bodies of rich ironstone have been discovered in various parts of the Territory, particularly between the Adelaide River and Rum Jungle. Owing to the lack of local coal, however, the deposits possess no immediate value.

3. **Iron and Steel Bounties.**—The local production of iron and steel has been encouraged by various legislative enactments (see Official Year Book No. 15, p. 348). Under "The Iron and Steel Products Bounty Act 1922," bounties are payable on fencing wire, galvanized sheets, wire-netting, and traction engines made in Australia. It is essential that these articles be made from materials produced and manufactured in Australia, unless imported material is authorized after inquiry and report by the Tariff Board. The total payments in any one financial year must not exceed £250,000. Rates of bounty are—for fencing wire and galvanized sheets, £2 12s. per ton; for wire-netting, £3 8s. per ton; and for traction engines from £40 to £90 each, according to capacity. The amounts paid in each case during the year ended 30th June, 1927, were £98,389, £67,915, £90,299, and £250. Under the amending Act of 1927, the bounty on galvanized sheets was

increased to £3 12s. per ton, and no bounty is payable on traction engines where the cost of materials or parts not produced in Australia amounts to more than 40 per cent. of the total cost.

4. **World's Production of Iron and Steel.**—The Australian production of iron and steel at present forms a very small proportion of the world's output. According to *The Mineral Industry*, the world's production of each commodity in the years specified for the principal countries was as follows:—

PIG IRON AND STEEL.—WORLD'S PRODUCTION, 1913, AND 1924 TO 1926.

Country.	Pig Iron.				Steel Ingots and Castings.			
	1913.	1924.	1925.	1926.	1913.	1924.	1925.	1926.
	Thousands of Tons.				Thousands of Tons.			
United States ..	30,653*	31,077	36,370	39,373	31,301	37,932	45,400	48,294
Germany ..	19,000	7,687	10,014	9,491	18,632	9,678	11,998	12,147
France	5,126	7,570	8,358	9,245	4,614	6,791	7,327	8,255
Saar Territory ..	..	1,367	1,430	1,600	..	1,423	1,550	1,700
Belgium ..	2,445	2,798	2,501	3,346	2,428	2,829	2,372	3,150
Luxemburg ..	..	2,123	2,325	2,472	..	1,857	2,053	2,208
Austria	2,344	263	374	325	2,585	371	462	480
Italy	420	299	474	513	919	1,337	1,757	1,685
Spain	418	489	461	460	238	531	571	615
Czecho-Slovakia ..	..	1,033	1,147	1,230	..	1,328	1,476	1,574
Sweden	732	505	425	460	582	493	467	486
Russia	4,563	746	1,521	2,300	4,181	1,122	2,087	2,975
China	150	300	300	300	100	150	150	150
Japan	236	807	825	850	300	1,081	1,150	1,200
United Kingdom..	10,260	7,307	6,236	2,441	7,664	8,201	7,397	3,497
India	204	877	888	902	..	335	449	450
Canada	1,015	619	596	738	1,043	650	753	777
Australia ..	**47**	**416**	**439**	**450**	..	**306**	**351**	**360**
Total—All Countries ..	77,813	66,928	75,336	77,725	74,687	77,529	88,975	91,232

For 1913 the figures for Germany include the production from Luxemburg, the Saar, and portion of Poland, and those for Austria include a large portion of Czecho-Slovakia and Hungary. The Japanese totals are inclusive of Manchuria and Korea.

§ 9. Other Metallic Minerals.

1. **Antimony.**—The production of antimony ore in New South Wales amounted in 1926 to 85 tons, valued at £1,236, the output being obtained at Hillgrove, Baryulgil and Macksville, while small quantities were raised at Uralla and Kempsey. The total quantity of antimony (metal and ore) raised in New South Wales up to the end of 1926 was 19,146 tons, valued at £346,219. The production of antimony concentrates in Victoria during 1925 amounted to 120 tons, valued at £5,380. The whole of the production came from ore raised by a company operating at Costerfield, but none was recorded in 1926. In Queensland extensive deposits were found at Neerdie in the Wide Bay district, at Wolfram Camp, on the Hodgkinson field, on the Palmer River in the Ravenswood district, and at various places in the Herberton district. Ore has also been obtained in the Dividing Range near Herberton and adjacent to some of the central tributaries of Emu Creek. Owing to the low price of the metal no production was recorded since the year 1919, except in 1926, when about 10 tons of ore valued at £105 were raised from deposits in the Clermont district. In Western Australia lodes of stibnite carrying gold have been found in the Roeburne district. During 1917, 12 tons of antimony, valued at £258 were exported, but there was no subsequent production until 1920, when 3 tons, valued at £45, were exported, and 1926, when an export of 4 tons, valued at £85 was recorded.

2. **Arsenic.**—In New South Wales the production of refined arsenic and concentrates in 1926 amounted to 405 tons, valued at £5,837, of which 206 tons of concentrates were produced by the Valla Gold Mines in the Bellingen division; 59 tons of refined arsenic at the Ottery Mine in the Emmaville division; 140 tons in the Hillgrove division; while small quantities of ore were raised in the Torrington division. A certain quantity of arsenic was also contained in silver lead concentrates exported overseas. During 1917 the high price ruling for arsenic and the urgency for the need of supplies in connexion with the destruction of prickly pear, led to the reservation by the Queensland Mines Department of an extensive area of arsenic-bearing deposits at Jibbinbar, in the Stanthorpe district. Production in 1926 from the Stanthorpe district amounted to 815 tons valued at £5,450. No arsenic was locally produced in 1926, the whole of the ore raised being sold for treatment outside the State. In South Australia arsenic-bearing minerals are found at some of the old mines, but, owing to slackness in the demand, only 100 tons of ore were raised in 1925, and none was raised in 1926. The arsenical ore (contained in gold ore) exported from Western Australia in 1926 was valued at £347.

3. **Bismuth.**—Ores of this metal are found in association with tungsten and molybdenum, and sometimes tin, in New South Wales, but owing to lack of a market the production of ore and concentrates in 1926 was only 8 tons valued at £773, the greater portion of the yield being obtained in the Oberon division. About 1 ton of concentrates was obtained at Kingsgate in the Glen Innes division. The total production to the end of 1926 was 813 tons, valued at £233,277. In Queensland wolfram and bismuth have been found in various districts, but, owing to the low prices obtainable, production in 1925 was small, amounting to 10 cwt., valued at £79, raised in the Chillagoe district, while there was no record of production in 1926. In South Australia deposits are found at Balhannah, at Mount Macdonald, and at Murninnie on the shores of Spencer's Gulf, A small quantity of bismuth was exported from Western Australia in 1919, but none was recorded subsequently. In Tasmania a small quantity, valued at £21, was raised in 1921 by the S. & M. mine at Middlesex, but there was no production in recent years.

4. **Cadmium.**—The cadmium contained in the zinc ores mined at Broken Hill is recovered at Risdon, Tasmania, as a by-product in the electrolytic treatment of calcined zinc concentrates. During the four years, 1922 to 1926, amounts of 36 tons, valued at £13,189; 123 tons, valued at £34,776; 150 tons, valued at £33,478; 156 tons, valued at £35,067, and 133 tons, valued at £24,577 respectively were so obtained, but, as pointed out previously, credit is not taken for the value of the finished product in the New South Wales returns as the metal is not recovered in the State. Tasmania in 1926 credited its mineral returns with 10 tons of cadmium, valued at £1,827, obtained from zinc calcines produced from local ore.

5. **Chromium.**—The output of chromite in New South Wales during 1926 was estimated at 597 tons, valued at £1,704, of which 510 tons were raised in the Barraba division, and 87 tons in the Copmanhurst division. Chrome iron ore is found in Queenslank in the Rockhampton district, and about 160 tons were raised in 1920 by the Mount Morgan Company at Glen Geddes, but there was no production during the last six years. Chromite has been discovered at Coobina on the overland route between Peak Hill and Nullagine in Western Australia, but, on account of the difficulties of transport and the low price of the mineral, there is no immediate likelihood of production.

6. **Cobalt.**—This metal was found at Carcoar in New South Wales in 1889, and subsequently of Bungonia, Port Macquarie, and various other places. There was no export of cobalt since 1911, and the total produced since 1860 amounted in value to only a little over £10,000. In Queensland a rich deposit was opened up in 1920 at Mount Cobalt in the Cloncurry area, and the production in 1926 amounted to 27 tons, valued at £5,430. Although the product is a valuable one, greater development is hindered by the uncertainty of the demand.

7. **Lead.**—Lead mining *per se* is not practised to any extent in Australia, the supply of the metal being chiefly obtained in conjunction with silver and zinc. In New South Wales the Mines Department took credit in 1922 for 8,113 tons, valued at £194,712, and the production to the end of 1922 was taken as 327,000 tons, valued at £6,442,000. Owing to the closing down of the treatment works at Cockle Creek in 1922 no subsequent production was recorded, the whole of the lead concentrates being

forwarded for treatment outside the State, principally at Port Pirie in South Australia. As stated previously, the metallic contents of the major portion of the silver-lead ores are extracted outside New South Wales, and the figures quoted above refer only to lead values assigned as the produce of the State. In Victoria, oxides, sulphides, and carbonates of lead are found in the reefs on most of the gold-fields. The deposits are not, however, of sufficient extent to repay the cost of working. In Queensland the deposits are worked chiefly for the silver, copper or gold contents of the ore, the lead produced in 1926 amounting to 3,735 tons, valued at £116,156. Of this total the Chillagoe area produced 1,886 tons, valued at £58,651 ; the Herberton area, 1,080 tons, valued at £33,580 ; Etheridge, 507 tons, £15,767 ; Cloncurry, 76 tons, valued at £2,372 ; and the Burketown area, 170 tons, valued at £5,287. Lead has been found at many places in South Australia, although, with few exceptions, the lodes are not of great size. Production in 1926 was returned at 28 tons, valued at £819. During 1926, lead and silver-lead ore exported from Western Australia amounted to 4,162 tons, valued at £76,741. The bulk of the product consists of lead ore raised on the Northampton field. Tasmanian lead production in 1926 was returned as 5,893 tons, valued at £183,167. The centres of production have already been referred to under §4.3. vi. hereinbefore.

8. **Manganese.**—During 1926 the output of manganese ore in New South Wales amounted to 1,290 tons, valued at £3,955, of which 1,007 tons were raised in the Grenfell division, 150 tons in the Deepwater division, 73 tons in the Tamworth division, and 30 tons each in the Gulgong and Cootamundra division. In Victoria the production in 1922 amounted to 150 tons, valued at £930, raised in the Heathcote division, but none was raised during the last four years. In Queensland there are extensive deposits of low-grade manganese ores in various places. High-grade ore is not available in quantity, but the deposits of medium grade at Kandanga should in future become a valuable asset in the steel industry. Production in 1926 amounted to 20 tons, valued at £40, raised in the Gympie area. Extensive deposits of the ore were mined at Boolcunda in South Australia some years ago, and it is found also at Pernatty, Hawker, and Gordon. The production in 1924 was valued at £1,128, but there was no output recorded in 1925 or 1926. The Pernatty ore is of high grade, and being free from deleterious substances is specially suited for use in making high-grade steel. In Western Australia, ores of the metal are found widely scattered, the black oxide being especially plentiful in the Kimberley district. Extensive deposits exist in a locality 18 miles north-west from Peak Hill. In the northern part of the Cue district the deposits cannot at present be profitably worked owing to absence of cheap transport facilities. The export of manganese in 1926 consisted of 82 tons, valued at £503.

9. **Molybdenum.**—The production of molybdenite in New South Wales during the year 1926 amounted to 10 cwt., valued at £41, obtained from mines at Kingsgate in the Glen Innes division. The total production of molybdenite since its discovery is stated at 827 tons, valued at £211,800. In Victoria 42 tons of concentrates valued at £7,350 were produced in 1926 at Everton. The production in Queensland for 1925 was 3 tons, valued at £271, partly raised on the Chillagoe field, and partly at Mount Perry, but none was raised in 1926. The Wombah mine near Mount Perry is regarded by geologists as one of the most promising sources of molybdenite in Australia. A small quantity was at one time produced from the mines in the Moonta district in South Australia, and the occurrence of the metal is reported from various other localities, but no production was recorded during the last five years. Molybdenite occurs in small quantities at various localities in Western Australia, the production recorded in 1922 being valued at £500, but none was recorded in later years. In the Northern Territory, molybdenite is found at Yenberrie, where it is stated that the ore increases in richness as the workings become deeper.

10. **Radium.**—Deposits of radio active ores occur in lode form in South Australia, and are believed to be richer and more extensive than any others so far located. There is an extensive deposit at Radium Hill, Olary, about 12 miles from Cutana railway siding, and another at Mount Painter in the Northern Flinders Ranges. Ores from both localities have yielded radium. Pure radium bromide was produced at a treatment plant in Sydney, and up to the end of 1914, when operations were suspended, 466 milligrammes were extracted. The Radium and Rare Earths Treatment Co. has been formed to exploit the radio-active ores at Olary, and a syndicate has taken up the

workings at Mount Painter. A sample of 11 milligrammes of radium bromide was extracted from 2½ tons of crude ore in 1925 by experts attached to the first named company. Extensive plant and buildings have been erected, and it is hoped that production on a large scale will shortly be possible. The value of ore raised in 1925 was set down at £172, but none was recorded in 1926.

11. **Tungsten.**—Wolfram and scheelite, the principal ores of tungsten, are both found in New South Wales, but the low prices obtainable caused a cessation of mining activity in this direction in recent years. Since 1920 there has been no production of scheelite, while the value of the wolfram produced was only £545. In Victoria the production of wolfram was returned in 1920 as 7½ tons, valued at £355, yields being obtained at Mount Murphy and the Tambo River, but there was no subsequent production. In Queensland, tungsten ores are found in several districts but, owing to low prices production in 1926 was insignificant, about 10 cwt. of wolfram being obtained in the Chillagoe area. (See also "Bismuth.") A deposit of wolfram was discovered near Yankalilla, in South Australia, as far back as 1893, but no production has been recorded since the year 1917. The mineral is also found at Callawonga Creek. There was no production of tungsten minerals in 1926 in Western Australia. Tungsten ores are commonly met with in the gold reefs, and both wolfram and scheelite have been recorded as occurring in several widely-separated localities. Wolfram is mined at various points in Tasmania, the production for 1926 being 83 tons, valued at £5,265. The price of the mineral was too low to allow of the mines being operated for wolfram alone, and the output was obtained from material associated with tin ore. Scheelite has been discovered on King Island in Bass Strait, but there was no recent production. In the Northern Territory wolfram is found at Hatches Creek, Wauchope Creek, Wolfram Creek, Hidden Valley, and Yenberrie. Numerous samples of high grade ore have been obtained at the Frew River in Central Australia. The production in 1923 was, however, trifling, and none was recorded later.

12. **Other Metals.**—In addition to the metals enumerated above there is a large number of others occurring in greater or less degree, while fresh discoveries are being constantly reported.

§ 10. Coal.

1. **Production in each State.**—An account of the discovery of coal in each State will be found in preceding issues of the Year Book. (See No. 3, pp. 515–6.) The quantity and value of the production in each State, and in Australia, during the five years 1922 to 1926, are given in the table hereunder :—

COAL.—PRODUCTION, 1922 TO 1926.

Year.	N.S.W.	(a) Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
			QUANTITY.				
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1922 ..	10,183,133	559,284	958,519	..	438,443	69,238	12,208,617
1923 ..	10,478,513	476,823	1,060.662	..	420,714	80,718	12,517,430
1924 ..	11,618,216	518,315	1,123.117	..	421 864	75 988	13,757.500
1925 ..	11,396,199	534,246	1,177,173	..	437,461	81,698	13.626.777
1926 ..	10,885,766	591,001	1,221,059	..	474 819	102,358	13,275,003
			VALUE.				
	£	£	£	£	£	£	£
1922 ..	8,507,946	664,251	840,472	..	381,555	61,016	10,455.240
1923 ..	8.607,892	525,270	925.227	..	368,949	70,797	10,498,135
1924 ..	9,589,547	569,555	985,542	..	363,255	66,555	11,574,454
1925 ..	9,302,515	596,117	1,037,956	..	363,203	70,424	11.370,215
1926 ..	9,436,520	657,798	1,098,927	..	394,400	90,401	11,678,046

(a) Exclusive of brown coal.

The figures for Victoria quoted above are exclusive of brown coal, the quantity and value of which during the last six years were as follows :—

BROWN COAL.—PRODUCTION, VICTORIA, 1921 TO 1926.

Year.	Quantity.	Value.	Year.	Quantity.	Value.
	Tons.	£		Tons.	£
1921	79,224	31,074	1924	127,490	41,116
1922	90,402	31,179	1925	876,468	166,404
1923	116,888	38,019	1926	957,935	188,899

2. **Distribution and Production of Coal in each State.**—(i) *New South Wales.*—Estimates of the quantity of merchantable coal available in the deposits in each State were given in preceding issues of the Official Year Book (See No. 20, pp. 752 *et seq.*), but considerations of space preclude the repetition of the information in the present issue.

The coal from the various districts differs considerably in quality—that from the Northern district being especially suitable for gas-making and household purposes, while the product of the Southern (Illawarra) and Western (Lithgow) is an excellent steaming coal. At the present time the Greta coal seams are being extensively worked between West Maitland and Cessnock, and this stretch of country, covering a distance of 15 miles, is now the most important coal-mining district in Australasia. The Permo-Carboniferous measures have in various places been disturbed by intrusions of volcanic rocks, which in some instances have completely cindered the seams in close proximity to the intrusive masses, while in other instances the coal has been turned into a natural coke, portion of which some years ago realized good prices as fuel.

The table hereunder gives the yields in each of the three districts during the five years 1922 to 1926 :—

COAL.—PRODUCTION IN DISTRICTS, NEW SOUTH WALES, 1922 TO 1926.

District.	1922.	1923.	1924.	1925.	1926.
	Tons.	Tons.	Tons.	Tons.	Tons.
Northern	7,156.921	6,861,759	8 077,689	7,637,953	7,257,598
Southern	1,878,594	2,170,699	1,973,855	2,052,963	2,024.520
Western	1,147,618	1,446,055	1,566,672	1,705,283	1,603,648
Total ..	10,183,133	10,478,513	11,618,216	11,396,199	10,885,766

The output in 1926, though much smaller than in each if the two preceding years may be considered satisfactory in view of the general stoppage on all the fields during the year.

(ii) *Victoria.* (*a*) *Black Coal.* The deposits of black coal in Victoria occur in the Jurassic system, the workable seams, of a thickness ranging from two feet three inches to six feet, being all in the Southern Gippsland district. An estimate, by R. H. Cambage, of the tonnage of extractable black coal places the total at 25 million tons, of which 20 millions are in the Wonthaggi area, 2 millions at Korumburra, Jumbunna, and Outtrim, and the balance in other small areas.

The output of black coal in Victoria during the last five years was as follows :—

BLACK COAL.—PRODUCTION, VICTORIA, 1922 TO 1926.

Year.	State Coal Mine.	*Other Coal Mines.	Total Production.	Value.
	Tons.	Tons.	Tons.	£
1922	511,174	48,110	559,284	664,251
1923	418,394	58,429	476,823	523,270
1924	452,032	66,283	518,315	569,555
1925	468,146	66,100	534,246	596,117
1926	531,869	59,132	591,001	657,798

Amongst the other coal mines the chief producers in 1926 were the Sunbeam Colliery at Korumburra, with 16,576 tons ; the Austral at Korumburra South, with 12,462 tons ; and the Jumbunna Coal Pty. Ltd. at Jumbunna, with 10,733 tons.

(*b*) *Brown Coal.*—(1) *General.* Deposits of brown coal and lignite of immense extent occur in gravels, sands, and clays of the Cainozoic period throughout Gippsland, Mornington Peninsula, Werribee Plains, Gellibrand, and Barwon and Moorabool basins. In the Latrobe Valley, the beds reach a thickness of over 800 feet. As estimated by boring, the total tonnage of brown coal available, according to a report by the Government Geologist, amounts to 10,378 million tons, of which 5,000 million tons are situated in the Morwell district, a similar quantity in the Traralgon district, 250 million tons at Welshpool-Gelliondale, while the Altona, Lal Lal, and Wensleydale areas are capable of supplying 100 millions, 25 millions, and 3 millions respectively. In 1917 an Advisory Committee appointed to report on the brown coal deposits of Victoria recommended the establishment of an open-cut mine at Morwell in connexion with a comprehensive scheme of electrical power generation and transmission, as well as for the supply of brown coal for other requirements. The recommendations of this Committee were incorporated in the " Electricity Commissioners Act " of 1918. The Commission is actively engaged in the work of opening up the Morwell deposits, and the product is being utilized for the generation of electricity, which is transferred to Melbourne and to other towns in Victoria within economic distance. The first generator at the Yallourn power station was brought into operation on the 15th June, 1924, and the works are now assisting in meeting the increasing demands for electric energy in the metropolitan and country areas of Victoria, and in certain areas in the south of New South Wales. The energy sold during the year 1926–27 amounted to about 246 million kw.-hours. A township has been established at Yallourn, with provision for an ultimate population of 3,000. On the 30th June, 1927, there were 2,160 employees engaged on the various works of the Commission as follows :—At Yallourn, 1,459 ; Transmission Lines, 187 ; Metropolitan Works, 250 ; Water Power Investigation, 13 ; District Undertakings, 167 ; and Rubicon Hydro-Electric Scheme, 84. Overhead lines erected to the 30th June, 1927, amounted to 1,129 route miles, and length of cable to 3,802 miles. At the same date about 157 miles of underground cable had been laid.

The brown coal produced in Victoria was raised chiefly at the State Open Cut at Yallourn, where the output in 1926 amounted to 734,004 tons, while 219,376 tons were raised at the old open cut at Morwell. During the year 3,252 tons were also raised by the Otway Coal Co., at Bambra, and 1,153 tons by the Victorian Central Coal and Iron Co. at Lal Lal, while 150 tons were won at Morwell by the Australian Commonwealth Fuels and Oils Ltd.

(2) *Production of Briquettes.* The briquetting plant started operations in November 1924, and the monthly output in 1926–27 was 9,123 tons, the total for the year being 109,500 tons. It should be noted, however, that the Yallourn plant is what is known as a " half factory," and economic production will necessitate an extension thereof. It is expected that the additions at present in progress will be in operation in 1928. The Yallourn briquettes are considered to be equal in quality to those produced in the best German factories.

According to the Report of the Geological Survey of the United States the world's production of briquettes in 1924 was 42 million tons, of which over 33 million tons were produced in Germany, 3 million tons in France, 2 million tons in Belgium, 1 million tons in the United Kingdom, while Spain, Netherlands, and the United States each produced about ½ million tons.

(3) *Distillation Products.* A new industry is in contemplation for the distillation of oil, motor spirit, and other valuable substances from brown coal, experiments in this direction on a small scale having yielded very satisfactory results.

(iii) *Queensland.* The distribution of production during the last three years was as follows :—

COAL PRODUCTION.—QUEENSLAND, 1924 TO 1926.

Districts.	1924.	1925.	1926.
	Tons.	Tons.	Tons.
Ipswich	596,720	614,053	649,184
Darling Downs	93,252	108,275	104,535
Wide Bay and Maryborough	105,181	119,704	109,519
Rockhampton (Central)	123,781	101,076	67,974
Clermont	55,799	62,204	77,947
Bowen	103,987	128,497	174,904
Mount Mulligan (Chillagoe)	44,397	43,364	36,852
Bundaberg	..	..	144
Total	1,123,117	1,177,173	1,221,059

The output in 1926 was the highest recorded. There were 35 collieries operating in the Ipswich district, 7 in the Darling Downs, 10 in the Maryborough area, 8 in the Central district, 1 at Mount Mulligan in the Chillagoe district, and 2 in the Bowen district. State coal mines are in operation at Collinsville in the Bowen field, at Mount Mulligan in the Chillagoe field, and at Baralaba and Styx in the Central area.

(iv) *South Australia.* Thin seams of black coal similar to the Jurassic coal of Victoria have been proved by a bore at Robe, but the depth at which the seams were located, i.e., between 2,830 feet and 3,950 feet, renders exploitation thereof unlikely. Reference to the situation and probable content of the widely distributed brown coal deposits in this State was made in Official Year Book No. 19, p. 750. In 1925, an expert commissioned by the Government to report on these deposits stated, amongst other things, that the brown coals at present known contain fairly large percentages of moisture, and have a high sulphur and ash content. Owing to their situation, deep-mining methods would be necessary to win the coal, at an estimated cost of 10s. per ton. An extensive system of "scout" boring was recommended, with a view to discovering deposits suitable for mining by open-cut methods.

(v) *Western Australia.* The production from the five collieries situated at Collie amounted in 1926 to 474,819 tons, of which 269,700 tons were supplied to the railways. The total output was over 37,000 tons in excess of that for the preceding year, and if the demand warranted it, the yield could be considerably increased.

(vi) *Tasmania.* Of the output in 1926, amounting to 102,358 tons, the Cornwall, Mt. Nicholas and Jubilee Collieries on the East Coast raised 46,000, 29,500, and 14,400 tons respectively. The Catamaran collieries returned an output of 9,950 tons of excellent steaming coal, a variety much needed in Tasmania. It is hoped that exploitation will develop a tonnage sufficient to make the State independent of outside supplies.

(vii) *Australia's Coal Reserves.* A summary of the information available in regard to estimated actual and possible reserves of coal for Australia as a whole was given in tabular form on p. 755 of Official Year Book No. 20, but considerations of space preclude its repetition in the present issue.

3. Production in Various Countries.—The total known coal production of the world in 1926 amounted to about 1,334 million tons, towards which Australia contributed nearly 14¼ million tons, or about 1 per cent. The following tables show the production of the chief British and foreign countries during each of the last three years where the returns are available. As the table shows there was a fall of 117 million tons in the returns for Great Britain in 1926, the reduced output being due to the strike.

COAL PRODUCTION.—BRITISH EMPIRE, 1924 TO 1926.

BLACK COAL.

Year.	Great Britain.	British India.	Canada.	Australia.	New Zealand.	Union of S. Africa.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1924	267,118,200	21,174,000	8,995,000	13,757,500	1,085,000	11,633,000
1925	243,176,200	20,904,000	8,490,000	13,626,800	1,005,000	12,115,000
1926	126,278,500	20,668,000	11,492,000	13,275,000	1,196,000	12,634,000

BROWN COAL, LIGNITE.

Year.	Great Britain.	British India.	Canada.	Australia.	New Zealand.	Union of S. Africa.
1924	..	..	3,182,000	127,500	998,200	..
1925	..	..	3,233,000	876,500	1,070,300	..
1926	..	..	3,203,000	957,900	1,044,000	..

COAL PRODUCTION.—FOREIGN COUNTRIES, 1924 TO 1926.

BLACK COAL.

Year.	Germany.	Belgium.	France.	Czecho-Slovakia.	Poland.	Netherlands.	Russia.	Japan.	United States.
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1924	130,924,000	22,970,000	43,272,000	14,924,000	31,684,000	6,076,000	13,698,000	31,488,000	510,363,000
1925	130,499,000	22,744,000	46,258,000	12,339,000	28,656,000	6,997,000	14,109,000	29,034,000	519,521,000
1926	142,921,000	24,895,000	51,596,000	14,166,000	34,762,000	8,514,000	24,900,000	..	591,715,000

BROWN COAL, LIGNITE.

Year.	Germany.	Belgium.	France.	Czecho-Slovakia.	Poland.	Netherlands.	Russia.	Japan.	United States.
1924	122,543,000	..	928,000	20,160,000	86,600	188,200	..	173,900	(a)
1925	137,442,000	..	990,000	17,738,000	61,000	204,300	..	..	(a)
1926	137,527,000	..	..	18,301,000	(a)	(a)	..	..	(a)

(a) Included with black coal.

4. **Exports.**—The exports of coal from Australia are chiefly confined to New South Wales.

The total quantity of coal of Australian production (exclusive of bunker coal) exported to other countries in 1926–27 was 807,000 tons, valued at £966,000, of which 803,000 tons were exported from New South Wales, and about 4,000 tons from Queensland.

In the following table will be found the quantity and value of the exports from New South Wales, during the last five years. The figures are given on the authority of the Mines Department of that State, and include both bunker coal and coal exported from New South Wales to other States.

COAL.—EXPORTS, NEW SOUTH WALES, 1922 TO 1926.

Year	1922.	1923.	1924.	1925.	1926.
Quantity, 1,000 tons	5,239	4,900	5,414	4,771	4,538
Value, £1,000	5,929	5,481	6,037	5,243	5,229

Of the 4,538,000 tons of coal exported from New South Wales in 1926, over 86 per cent., or 3,921,000 tons, were shipped at Newcastle; 316,000 tons (including bunker coal, 161,000 tons) at Port Kembla and Bellambi; and about 300,000 tons, mostly bunker coal, at Sydney.

The principal countries to which coal was forwarded from Newcastle during the last three years were as follows:—

EXPORTS OF COAL FROM NEWCASTLE, NEW SOUTH WALES, 1924 to 1926.

Country of Destination.	1924.	1925.	1926.
	Tons.	Tons.	Tons.
Victoria	1,691,000	1,502,000	1,389,000
New Zealand	715,900	616,000	495,000
South Australia	903,600	934,600	887,000
Tasmania	153,400	125,200	116,300
Western Australia	81,900	115,000	76,600
Queensland	78,100	101,300	103,600
United Kingdom	196,900	166,700	195,500
Java	81,300	98,800	102,800
Chile	109,600	4,600	13,200
United States	56,900	47,000	56,000
Philippine Islands	175,400	112,000	122,800
Argentine	..	..	91,100
India	54,700	34,900	34,800
Straits Settlements	110,700	37,100	22,900
Sandwich Islands	15,900	11,700	..
Fiji	31,200	48,300	36,700
Noumea	17,600	33,800	11,000
Peru	28,700	36,400	23,600
Japan	25,100	13,300	11,000
Ocean Island	19,000	20,900	20,700
Nauru	24,600	21,400	13,700
Canada	9,400	21,200	9,600
Germany	18,200	15,900	19,000
Total—All Countries ..	4,688,000	4,174,000	3,921,000

During the year 1926 the exports from Port Kembla and Bellambi to other States amounted to 108,000 tons, while 25,000 tons were sent to New Caledonia, 13,000 tons to the Argentine, and 8,800 tons to Egypt. The coal shipped from Sydney went principally to the Gilbert and British Solomon Islands. For the twelve months ended 30th June, 1926, about 20,000 tons of coal were dispatched to interstate ports from the jetty at Catherine Hill Bay, near Newcastle.

The distribution of the total output from New South Wales collieries during the last five years was as follows, the particulars given of quantity exported including coal shipped as bunker coal:—

COAL.—DISTRIBUTION OF OUTPUT, NEW SOUTH WALES, 1922 TO 1926.

Year.	Exports to Australian Ports.	Exports to Foreign Ports.	Local Consumption.	Total.
	Tons.	Tons.	Tons.	Tons.
1922	2,841,253	2,398,144	4,943,736	10,183,133
1923	2,518,579	2,381,549	5,578,385	10,478,513
1924	3,096,881	2,317,063	6,204,272	11,618,216
1925	3,001,823	1,769,215	6,625,161	11,396,199
1926	2,740,570	1,797,257	6,347,939	10,885,766

For the period of five years shown in the table above, 26 per cent. of the total output was exported to other States, 20 per cent. was sent overseas, and 54 per cent. was consumed locally.

The figures quoted are given on the authority of the New South Wales Mines Department.

5. Consumption in Australia.—An estimate of the consumption of coal in Australia may be arrived at by adding the imports to the home production, and deducting the exports (including bunker coal taken by oversea vessels). The following table shows the consumption computed in the manner specified, for the last five years :—

COAL.—CONSUMPTION, AUSTRALIA, 1922 TO 1926.

Year.	Quantity of Coal Consumed.		
	Home Produce.	Produce of Other Countries.	Total.
	Tons.	Tons.	Tons.
1922	9,531,274	46,620	9,577,894
1923	10,022,228	62,660	10,084,888
1924	11,395,631	9,234	11,404,865
1925	12,536,179	9,137	12,545,316
1926	12,338,644	26,080	12,364,724

The bunker coal taken away in 1926 was estimated at 1,023,000 tons.

6. Prices.—(i) *New South Wales.* The price of New South Wales coal depends on the district from which it is obtained, the northern district coal always realizing a much higher rate than the southern or western product. The average price on the mine in each district and for the State as a whole during the last five years was as follows :—

COAL.—PRICES, NEW SOUTH WALES, 1922 TO 1926.

Year.	Northern District.	Southern District.	Western District.	Average for State.
	Per ton. *s.* *d.*	Per ton. *s.* *d.*	Per ton. *s.* *d.*	Per ton. *s.* *d.*
1922	17 6	16 3	12 8	16 9
1923	17 7	16 1	11 5	16 5
1924	17 8	16 2	11 2	16 7
1925	17 7	15 11	11 1	16 4
1926	18 10	16 5	11 9	17 4

(ii) *Victoria.* In Victoria the average price of coal in 1922 was 23s. 9d.; in 1923 22s.; in 1924, 21s.; in 1925, 22s. 4d.; and in 1926, 22s. 3d. per ton. These averages are exclusive of brown coal, the production of which in 1926 was valued at 3s. 11d. per ton.

(iii) *Queensland.* Prices in the principal coal-producing districts during the last five years were as follows :—

COAL.—PRICES, QUEENSLAND, 1922 TO 1926.

District.	Value at Pit's Mouth.				
	1922.	1923.	1924.	1925.	1926.
	Per ton. *s.* *d.*	Per ton. *s.* *d.*	Per ton. *s.* *d.*	Per ton. *s.* *d.*	Per ton. *s.* *d.*
Ipswich	16 8	16 11	16 8	16 7	17 2
Darling Downs	18 11	19 1	18 10	18 8	19 2
Wide Bay and Maryborough	27 2	25 0	24 3	24 3	24 2
Bundaberg	..	..	..	..	24 7
Rockhampton	16 5	15 5	15 0	16 1	17 10
Clermont	13 10	12 10	11 0	12 0	13 6
Bowen (State Coal Mine) ..	16 1	16 0	16 5	16 0	16 2
Mount Mulligan (Chillagoe)	20 0	22 6	29 6	31 3	30 4
Average for State ..	17 6	17 5	17 8	17 8	18 0

The readjustment of prices and wages in the industry was responsible for the increases in the averages during the last four years.

(iv) *Western Australia.* The average price of the Collie (Western Australia) coal during the last five years was as follows :—In 1922, 17s. 5d. ; in 1923, 17s. 6d. ; in 1924, 17s. 3d. ; in 1925, 16s. 7d, ; and in 1926, 16s. 7d. per ton.

(v) *Tasmania.* The average price per ton of coal at the pit's mouth in Tasmania for the five years 1922 to 1926 was :—In 1922, 17s. 7d. ; in 1923, 17s. 6d. ; in 1924, 17s. 6d. ; in 1925, 17s. 3d. ; and in 1926, 17s. 8d. per ton.

7. **Prices in the United Kingdom.**—During the five years 1922 to 1926 the average selling value of coal at the pit's mouth in the United Kingdom was :—In 1922, 17s. 7d. ; in 1923, 18s. 10d. ; in 1924, 18s. 10d. ; in 1925, 16s. 4d. ; and in 1926, 19s. 6d. per ton.

8. **Employment and Accidents in Coal Mining.**—The number of persons employed in coal mining in each of the States during the year 1926 is shown below. The table also gives the number of persons killed and injured, with the proportion per 1,000 employed, while further columns are added showing the quantity of coal raised for each person killed and injured, this being a factor which must be reckoned with in any consideration of the degree of risk attending mining operations. A further table gives the rate of fatalities during the last five years.

According to the report of the Chief Inspector of Mines the average death-rate per 1,000 miners from accidents in coal mines in Great Britain during the quinquennium 1922–26 was 1.02, the rates varying between 1.08 in 1926, and 0.95 in 1922, while, as shown in the table following, the rate for Australia for the same period was 1.01. In the United States during the three years 1923–25 the death rate per 1,000 employees averaged 4.9 for bituminous coal miners, and 3.7 for anthracite miners. Rates for other coal-producing countries for the same period were—Canada, 2.7 ; South Africa, 2.7 ; Germany, 2.2 ; Spain, 1.7 ; Belgium, 1.1 ; France, 1.0. In comparing these rates, allowance must be made for the circumstance that the methods of calculation are not identical in all countries.

COAL MINING.—EMPLOYMENT AND ACCIDENTS, 1926.

State.	Persons Employed in Coal Mining.	No. of Persons.		Proportion per 1,000 Employed.		Tons of Coal raised for each Person.	
		Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
New South Wales ..	24,781	25	102	1.01	4.11	435,400	106,700
Victoria	2,939	1	6	0.34	2.04	1,548,900	258,200
Queensland ..	3,020	2	88	0.66	29.14	610,500	13,900
Western Australia ..	686	..	89	..	129.74	..	5,300
Tasmania	348	..	6	..	17.24	..	17,100
Total ..	31,774	28	291	0.88	9.16	508,300	48,900

Owing to lack of uniformity in the definition of "injury," the figures relating to persons injured possess little comparative value.

The next table shows the average number of miners employed, number of fatalities, and rate per 1,000 during the quinquennium 1922–26 :—

COAL MINING.—FATALITIES, 1922 TO 1926.

State.	Average No. of Coal Miners.	Average No. of Fatal Accidents.	Rate per 1,000 Employed.
New South Wales	23,297	24.4	1.05
Victoria	2,383	2.0	0.84
Queensland	2,756	2.6	0.94
South Australia	4	..	..
Western Australia	698	0.4	0.57
Tasmania	287	0.2	0.70
Total	29,425	29.6	1.01

Figures for coal miners in South Australia appeared for the first time in 1922, the miners being engaged chiefly on work in connexion with the brown coal deposits.

For Queensland the rate for the quinquennium 1922–6 was 2.6, as against 17.6 for the five years 1921–5, when the figures were swollen by the inclusion in 1921 of the 75 deaths in the disaster at Mount Mulligan.

§ 11. Coke.

1. Production.—Notwithstanding the large deposits of excellent coal in Australia, there was, prior to the war, a fairly considerable amount of coke imported from abroad. During recent years, however, a high standard of excellence has been attained in the local product, and the necessity for import has to a large extent disappeared. During the year 1926–27 the coke imported amounted to 29,000 tons, of which 17,000 tons were obtained from the United Kingdom and 12,000 tons from Germany, the bulk of the product being taken by South Australia for use in the ore-treating works at Port Pirie. The table hereunder gives the production in New South Wales during the last five years :—

COKE.—PRODUCTION, NEW SOUTH WALES, 1922 TO 1926.

Year	1922.	1923.	1924.	1925.	1926.
Quantity .. tons	240,229	580,374	564,372	609,418	597,663
Value, total .. £	382,926	941,323	932,926	942,448	940,416
Value, per ton	31s. 10d.	32s. 5d.	33s. 1d.	30s. 11d.	31s. 6d.

The figures quoted refer to metallurgical coke, the product of coke ovens, and are exclusive of coke produced in the ordinary way at gas works.

During recent years the industry has made considerable progress, and with the development of local iron and steel works, as well as metal refineries and smelting establishments, its future prospects ought to be assured. The small quantity made in 1922 was due to the lessened demand consequent on the closing down of the steel works at Newcastle, while the improvement manifested in 1923 was resultant on the recommencement of operations.

A small quantity of coke is made in Queensland, the quantity returned in 1926 being 6,191 tons, valued at £10,741, but the coke consumed in the State is to some extent obtained from outside sources. The following table shows the amount manufactured locally during the last five years :—

COKE.—PRODUCTION, QUEENSLAND, 1922 TO 1926.

Year	1922.	1923.	1924.	1925.	1926.
Quantity .. tons	6,748	5,244	7,116	5,384	6,191

Information regarding the exact quantity of coke imported from New South Wales and elsewhere is not available.

In order to avoid duplication with coal values the returns for coke have not been included in the general tables of mineral production in the early part of this chapter.

§ 12. Oil Shale and Mineral Oil.

1. **Production.**—(i) *New South Wales.* The production of kerosene shale amounted during 1924 to 642 tons, valued at £962, as compared with 32,489 tons valued at £77,380 in 1921, but none was mined in 1925 or in 1926. It is estimated that the total quantity of shale in the State amounts to 40 million tons, but its profitable exploitation depends on economic methods of production. Up to date there has been no production of petroleum, but boring operations were carried out at the Loder dome site in the Singleton division. The prospects of striking flow oil in the Belford dome and the associated structures known as the Loder and Sedgefield domes in the Hunter River district appeared encouraging, and the Federal Government offered to subsidize on a £1 for £1 basis up to £22,500 approved boring operations in this area by the State or a private company. The Government Geologist of New South Wales has, however, expressed the opinion that " there is nothing in the nature of evidence to justify a belief in the existence of commercial supplies of oil or gas in the domes under consideration." A small supply of natural gas was encountered in a bore in the Belford area.

(ii) *Victoria.* Up to the present no extensive deposit of oil shale has been located in Victoria. Bores in search of oil have been put down from time to time, but so far without result, and the State geological authorities take an unfavourable view of the prospects of obtaining it. A small quantity of heavy grade crude mineral oil was recently recovered from a bore at Lakes Entrance.

(iii) *Queensland.* The Lander Oil Co. ceased operations in 1926, when its drilling plant and equipment were taken over by the Roma Oil Corporation Ltd. which is vigorously prospecting for oil in the vicinity of Roma. A small quantity of oil has already been produced, and indications are encouraging, but at the time of writing it is too early to express decided views as to the possibilities of commercial supplies becoming available. It may be noted that the lack of sufficient rock exposures in the Roma area renders the task of selecting satisfactory bore sites an extremely difficult one.

The Commonwealth Government has allocated to the State a sum of £5,000 for detailed geological survey work. (See also Official Year Book No. 18, p. 801, and No. 19, p. 756).

(iv) *South Australia.* A considerable amount of money has been spent by private companies and individuals in the search for oil, but the results so far have been negative. Unfortunately a good deal of boring has been done either without or against the advice of competent geologists. The South Australian Government offers a bonus of £5,000 to the person or company first producing 100,000 gals. of crude petroleum from a bore or well in the State.

(v) *Western Australia.* In this State the chief interest in the search for oil centres in the Kimberley division. At Mount Wynne, in West Kimberley, the gas which bubbles freely in a hot spring has been found to contain hydrocarbons. Indications of free petroleum have been obtained in bores on Price's Creek, about 100 miles south-east of Mount Wynne, and traces of mineral oil have been detected in a seepage. In East Kimberley a black bitumen, residual from an asphaltic oil, has been found in weathered basalt in two localities 5 miles apart, thus indicating the former circulation of petroleum in the area. Boring operations were in progress during 1926 at " Freney's " in the Northern area, on sites selected by an expert on behalf of the Federal Government. At times excitement has been aroused by the discovery in various localities of accumulations of coorongite, but the mineral is not in any way connected with seepages of petroleum as it consists of a rubber-like aggregation of a microscopic single-celled alga on the surface of swamps.

(vi) *Tasmania.* The deposits of oil shale in Tasmania in the Latrobe-Railton-Kimberley, Oonah, Beulah, Quamby Bluff, and Nook areas have an estimated capacity of upwards of 40 million tons. In addition the recently discovered deposits at Cheshunt are known to be large, but their full extent has not been determined. During the last ten years exploitation of the vast areas available has been comparatively very small. For 1926 the output was 2,127 tons, valued at £1,475, the largest producer being the Australian Shale Oil Corporation at Latrobe. It is hoped that the problem of efficiently and economically retorting on a large scale will shortly be solved. A new discovery of shale was recently made near Chudleigh, in the Deloraine district.

(vii) *Northern Territory.* Considerable activity has been displayed during recent years by speculators in acquiring areas under coal and oil prospecting licences along the north-western boundary of the Territory, and northerly along the western coast to the Daly River, but so far no developments have been recorded, although what are regarded locally as good indications of oil have been discovered. Many of the licences have been forfeited, and, so far, no success has attended the boring operations at Elcho Island, although the prospects were considered satisfactory.

(viii) *Papua.* In 1911 indications of petroleum were reported near the Vailala River, and, acting on the reports of geologists, an oil expert was despatched by the Commonwealth Government to sink trial bores on the site. Early in 1913 a small quantity of oil was obtained from a shallow bore. Later on, extensive geological surveys were made of the country between Yule Island and the Purari Delta, and oil was encountered in several trial bores. In 1919 the Anglo-Persian Oil Co., under agreement with the British and Commonwealth Governments, and latterly with the Commonwealth Government only, has been engaged in work on the field. At the 30th June, 1927, there were nine mineral oil and coal licences embracing an area of 7,922 square miles. The Anglo-Persian Co. is putting down a fourth bore at Popo, and other Companies have sunk bores in the Gulf Division, in the Western Division, and near Cape Vogel on the north-east coast.

(ix) *New Guinea.* At Matapau, about 54 miles from Aitape on the north coast of what was formerly German New Guinea, oil has been struck in a shallow bore, and hopes are entertained that the product will be encountered in large volume at a greater depth. At 30th June, 1927, there were in force 8 licences to prospect for mineral oil and coal.

2. **Expert's Report.**—A report by Dr. Wade presented to the Senate in October, 1924, by the Minister for Home and Territories was generally unfavourable to the prospects of finding commercial supplies of petroleum in the northern portions of Western Australia and the Northern Territory. The report points out that the marginal areas on the Fitzroy apparently offered the best possibilities, and special mention was made of the Price's Creek region, although the structure there was not satisfactory in regard to present geological knowledge. It was recommended that the district should be tested with boring plant capable of penetrating to a depth of between 3,000 and 4,000 feet. Allusion was also made to the possibility of locating oil in the Belford dome area in New South Wales.

3. **Exports.**—During the last five years the exports of kerosene shale have been trifling, only 11 tons being shipped from New South Wales in 1923-24, and 1 ton in 1924–25, while 1 ton was exported from Victoria in 1925-26. There was no export in 1926–27.

4. **Mineral Oil Bounties.**—The offer by the Commonwealth Government of a reward up to £50,000 for the discovery of oil in Australia was withdrawn in 1925, and under the Petroleum Prospecting Act of 1926 a sum of £60,000 was allocated for providing aid to persons or companies engaged in the search for oil and to assist in geological survey work. The whole of the money has been expended, and legislation is foreshadowed providing for a further sum of £100,000.

§ 13. Other Non-metallic Minerals.

1. **Alunite.**—The production of this mineral in New South Wales amounted during 1926 to 580 tons, valued at £2,320, raised in the Bullahdelah division. The mineral is sent to England for treatment, and, to the end of 1926, the exports were 58,200 tons, valued at £209,000.

In South Australia a deposit of the mineral was located in 1913 at Carrickalinga Head, on the coast north of Normanville, and within a short distance of Adelaide. Fresh discoveries were later reported on the western shores of St. Vincent's Gulf. Systematic prospecting has proved the existence of a deposit of at least 41,000 tons near Stansbury, on the eastern coast of Yorke Peninsula. The mineral returns show a production of 95 tons in 1922, but none was recorded subsequently.

The exploitation of the alunite deposits in the North-East Coolgardie field in Western Australia has been retarded pending the result of field experiments to determine the suitability or otherwise of the product as a fertilizer in its unroasted state. Deposits of the mineral are also found in the Kalgoorlie area.

2. **Asbestos.**—This substance has been found in various parts of Australia, but up to the present has not been produced in any considerable quantity. In New South Wales the production in 1926 amounted to 4 tons, valued at £20, raised at Byng in the Orange division. In Queensland seams of asbestos have been found over a belt of country extending from Cawarral to Canoona, as well as in other districts. Samples of the fibre proved suitable for the manufacture of fibro-cement sheeting and tiles, but so far the deposits have not been commercially exploited. Deposits of asbestos have been located at various places in South Australia. Production in 1924 amounted to 80 cwt., valued at £80, but none was raised in 1925 and 1926. Chrysotile asbestos of high grade is found in various localities in Western Australia, particularly in the Serpentine rocks between Nullagine and Roeburne, over a distance of 200 miles. The production in 1926 amounted to 105 tons, valued at £2,728, of which 91 tons were obtained in the Pilbara field and 14 tons in the West Pilbara field. In 1918, 2,854 tons of asbestos, valued at £5,008, were produced in Tasmania. A small quantity was raised in 1919, but there was no production during recent years.

3. **Barytes.**—In New South Wales large quantities of this mineral are available at Kempfield in the Trunkey division, but the production in 1926 amounted to only 200 tons, valued at £400. Deposits are also found in the Candelo and Taralga divisions. The production in South Australia during 1926 was given as 1,742 tons, valued at £5,226. In this State there are extensive deposits at Noarlunga and Pernatty Lagoon. The mineral is also worked near Williamstown, while new sources of supply have been located near Eudunda. High grade natural white barytes is obtained from some of the workings, but a large amount of lower grade ore is discarded or wasted owing to lack of facilities for cleaning and bleaching. Barytes in fair-sized veins occurs at many places in Western Australia, especially at Cranbrook in the south-west division. The export in 1921 was, however, small, being valued at under £20, and none was recorded in later years. About 1,000 tons of barytes, valued at £4,000, were produced in Tasmania in 1920, the greater portion being won from deposits near Queenstown and Mt. Jukes, and the balance from Beulah and elsewhere, but there was no further production recorded until 1925, when a little over 3 tons, valued at £16, was raised, while none was raised in 1926. It is stated that cost of transport is too high to allow of profitable production at present rates.

4. **Clays and Pigments.**—Valuable deposits of clays and pigments of various sorts are found throughout Australia. There is a considerable local production of earthenware, bricks, and tiles, but the finer clays have not as yet been extensively used. In New South Wales the production of pigments amounted in 1926 to 526 tons, valued at £644. The returns show that 300 tons of yellow ochre were raised at Delroy in the Dubbo division, and 85 tons of red ochre in the Gulgong division, while production was also reported from the Binalong, Milton, Newcastle, and Sydney divisions. About 4,800 tons of white clay, valued at £6,700, were raised from various areas during the year. The output of fireclay amounted to 18,420 tons, valued at £5,087, obtained chiefly in the Wollongong and Sydney divisions. In Victoria 3,153 tons of kaolin, valued at £4,157, were produced in 1926 from deposits at Stawell, Mt. Egerton, Bendigo, Heathcote, and Pyalong, and 2,278 tons of pigment clays, valued at £1,275, were raised from leases at Ballarat, Berringa, Castlemaine, and Heathcote. Sixty tons of jarosite pigment, valued at £660, were raised at Port Addis. In Queensland, 335 tons of fireclay, valued at £184, were mined during 1925 in the Mount Morgan district. Deposits of fine white clay have been located near Wondai and Kingaroy. In South Australia ochre is obtained at the Copper King pigment mine near Beltana, and is also raised near Oodnadatta. Production in 1926 amounted to 36 tons, valued at £297. Red oxide of suitable quality as well as ochres of various hues have been found in different and widely-separated localities in Western Australia. Investigation has proved the existence of a deposit of a fine white-ware clay about 4 miles from the railway at Wagin. Fireclay of good quality has been found at Clackline on the Eastern railway, about 50 miles from Perth. Porcelain and other clays of good quality have been found in

Tasmania at Beaconsfield, Sorell, Hagley, etc. Oil and water paints have been made from coloured ochres from Sorell, and deposits of ochre have been located near Mowbray and Beaconsfield. In 1926 the output was 38 tons, valued at £69.

5. **Felspar.**—During 1926, the production of this mineral in New South Wales was 11 tons, valued at £11, raised at Brewongle. A fairly extensive deposit of felspar has been located at Black Ridge near Williamstown in South Australia, and the mineral has also been found near Myponga. Production in 1926 amounted to 103 tons, valued at £309. About 8 tons of felspar, valued at £250, were exported during 1926 from Western Australia. A large deposit of the mineral has been located near Jacob's Siding, and it occurs in the Coolgardie area.

6. **Fluorspar.**—At Carboona in the Tumbarumba division in New South Wales this mineral is mined with silver and lead, the production in 1924 amounting to 470 tons, but none was raised in 1925 and 1926. In Victoria 196 tons, valued at £625, were raised in 1921 by a company operating at Walwa, but none was recorded in later years. A high grade fluorspar occurs at the Perseverance mine on the Chillagoe railway in Queensland. Production in 1926 amounted to 2,311 tons, valued at £4,148. The output is, however, retarded by lack of a permanent market, low price, and increased mining costs at depth.

7. **Fuller's Earth.**—About 30 tons of this material, valued at £50, were produced in 1925 from deposits in the Mudgee division, New South Wales, but no output was recorded in 1926. A large deposit of excellent quality has been located near Jennacubbine in Western Australia.

8. **Graphite.**—This mineral is widely distributed throughout Australia, but there was no record of production in 1926. (See Official Year Book 19, p. 760.) In South Australia flake graphite has been found at various places on Eyre Peninsula. An extensive deposit has been located near Port Lincoln and a company has been formed to exploit the area.

9. **Gypsum.**—The output of gypsum in New South Wales during 1926 was 817 tons, valued at £1,287, of which 717 tons were raised in the Hillston division, and 100 tons in the Hay division. In Victoria during 1926 there was a production of 10,217 tons, valued at £7,613, of which 831 tons were raised from leases at Boort; 126 tons at Cowangie; 2,311 tons at Waitchie; 6,388 tons at Bolton; 307 tons at Lake Boga: 214 tons at Murraydale; and 40 tons at Chillingollah. South Australia possesses valuable deposits at Lake MacDonnell, and at Marion Bay and Cape Spencer in Yorke Peninsula. The production in 1926 amounted to 65,613 tons, valued at £57,411. A considerable quantity is used in the manufacture of plaster and cement, as well as for agricultural purposes. Gypsum is widely distributed in Western Australia in tertiary and late tertiary deposits associated chiefly with the salt lakes of the arid regions of the interior south of the tropics. Many of these lacustrine deposits are capable of yielding large tonnages. The production in 1926 amounted to 3,918 tons, valued at £5,618

10. **Magnesite.**—Deposits of this mineral have been discovered at several localities in New South Wales. During 1926 the output was 10,263 tons, valued at £14,375, of which about 8,000 tons were raised at Attunga in the Tamworth division, 1,800 tons in the Fifield division, and 120 tons in the Cobar division. The mineral is found at Heathcote in Victoria, where 94 tons, valued at £281, were produced in 1926. There are deposits in the neighbourhood of Rockhampton and Bowen in Queensland, and in 1925 an output of 267 tons was recorded from the Rockhampton area, but there was no output in 1926. The deposits at present being worked in South Australia are situated at Paratoo, Robertstown, and Copley. Several other deposits have been located on Eyre Peninsula, near Port Pirie, and near Oladdie. Production in 1926 amounted to 226 tons, valued at £565. A large area of magnesite-bearing country has been located in Western Australia at Bulong, about 20 miles east of Kalgoorlie, and deposits have also been found at Coolgardie and other places. The mineral is of a high degree of purity, but there has been no production of importance since 1915.

11. **Mica.**—Mica is found at various places in Australia, and in 1925 a small quantity was raised at Wanda Vale in the Broken Hill division in New South Wales, and a little prospecting was carried out in the Narrabri division. There was no record of production in 1926. Muscovite in fairly large quantities is found at Mica Creek, near Mount Isa

in Queensland. The production in 1925 amounted to 10 cwt., valued at £700, and the report thereon was so satisfactory that it was proposed to exploit the deposits on a large scale, but none was raised in 1926. A company was recently formed in London to exploit a deposit at Yinnietharra, about 240 miles from Carnarvon in Western Australia. In 1926 an export of 4 tons, valued at £8,328, was recorded, but it would appear that the value is overestimated. The production of mica in the Northern Territory during 1925 was returned at 7,440 lb., valued at £2,835, obtained chiefly from the Hart's Range area.

12. **Phosphate Rock.**—During 1926, 253 tons of phosphate, valued at £316, were obtained in New South Wales, of which 170 tons were won in the Molong division, 35 in the Inverell division, and 48 in the Kempsey division. In Victoria 120 tons, valued at £120, were raised in 1926 at Mansfield. The production in Queensland amounted in 1922 to 65 tons valued at £279, raised by the Holbourne Island Phosphate Company in the Bowen district. Difficulty in finding a market for the product was responsible for the small output, and none was raised in the last four years. South Australia possesses deposits scattered over a belt of country 200 miles in length, from Myponga in the south to the district round Carrieton, in the north. Production in 1926 amounted to 882 tons, valued at £864, obtained in the Light division of the Central area. It is stated that the industry is meeting with severe competition in the high grade phosphate imported from Nauru. In Western Australia the known phosphate deposits occur principally on the coastal islands, and in portion of the coastal plain between Dongarra and Perth. Some years ago guano digging on the islands was a large and profitable induscry.

13. **Salt.**—Salt is obtained from salt lakes in the Western and North-Western districts of Victoria, and from salterns in the neighbourhood of Geelong. Figures regarding production are, however, not available for publication. Large quantities are obtained from the shallow salt lakes of South Australia, chiefly on Yorke Peninsula. Lake Hart, about 60 square miles in area, situated about 120 miles N.W. from Port Augusta, contains immense supplies of salt of good quality, and supplies are also obtained from Lake Bumbunga north of the head of St. Vincent's Gulf. During recent years a fair amount has been produced by evaporation of sea water at the heads of Spencer's and St. Vincent's Gulfs. About 91,000 tons of crude salt, valued at £205,000, were produced during 1926, these figures being the largest yet recorded. In Western Australia salt is obtained from depressions in the calcareous sandstones of the coast, which are filled to a shallow depth in winter with salt water. In summer the depressions dry up, leaving a layer of salt two or three inches thick, which is collected and refined. Up to the present, the four chief localities producing salt were Rottnest Island, off Fremantle; Middle Island, near Esperance; Yarra Yarra Lakes, near Three Springs; and Lynton, near Port Gregory. There is a very large number of salt and brine lakes which may ultimately be used as sources of salt. In the Northern Territory a small quantity of salt is produced from salt pans on Ludmillah Creek near Fannie Bay.

14. **Diatomaceous Earth.**—Although this mineral has been found at various localities in New South Wales, the deposits have not been worked commercially on any considerable scale. The output in 1926 was 911 tons, valued at £1,765, of which 427 tons were raised in the Coonabarabran division, 434 tons in the Barraba division, and 49 tons at Bunyan in the Cooma division. A small quantity also was raised in the Lismore division. Part of the product is used as a filtering medium in the manufacture of gelatine, and part for the manufacture of metal polish in powdered and liquid form. In Victoria there is a remarkably pure deposit at Lillicur, near Talbot, while beds of the mineral are also met with at other places in the Loddon Valley, near Ballarat, at various places close to Melbourne, at Craigieburn, Lancefield, Portland, Swan Hill, Bacchus Marsh, etc. During 1920, a production of 1,000 tons, valued at £5,000, was recorded, but no production was returned in later years. Fairly extensive deposits of diatomite exist in Queensland, in the Nerang, Beaudesert, and Canungar areas, but the various outcrops have as yet been only partly examined. In Tasmania a deposit of diatomaceous earth has been located at Oatlands, but its use for the manufacture of explosives is apparently prejudiced by the circumstance that the diatoms are pulverized and contaminated with clay.

§ 14. Gems and Gemstones.

1. Diamonds.—It is difficult to secure accurate returns in connexion with the production of precious stones, but the yield of diamonds in 1926 in New South Wales was estimated at 64 carats, valued at £77, while the total production to the end of 1926 is given at 202,232 carats, valued at £144,529 The yield in 1926 was obtained chiefly at Copeton in the Tingha division and a small return was reported from the Crookwell division. Small quantities of diamonds are found in Victoria in the gravels of streams running through granite country in the Beechworth district, at Kongbool in the Western District, and near Benalla. The stones are generally small, and the production up to date has been trifling. In 1912, eleven small diamonds, valued at £20, were picked out of the sluice boxes of the Great Southern alluvial mine at Rutherglen. In Queensland a discovery was made in 1924 at Diamond Vale, about 2 miles east of Stanthorpe, the stones being found in alluvial tin wash. A flawless green diamond weighing 1 carat, a slightly smaller green, and a white weighing 1 carat, were recovered. The green diamond is extremely rare, and a specimen weighing 1½ carats, exhibited at Wembley Park, was valued at £1,750. In South Australia diamonds have been found on the Echunga gold-fields, the most notable gem being Glover's diamond, which was sold for £70. A few small diamonds have been found in the Pilbara district in Western Australia. Small diamonds have, from time to time, been found in Tasmania, chiefly while sluicing for gold in the Donaldson district.

2. Sapphires.—The production of sapphires in New South Wales during 1926 was returned as 1,808 ozs., valued at £2,418, obtained at Horse Gully, Sapphire and Nullamanna in the Inverell division. It is probable that the output is understated owing to the difficulty of obtaining accurate returns from individual miners and prospectors. A fair quantity of machine stones, zircon and corundum, was also raised, but values thereof are not included in the figures above. Operations in 1926 were greatly retarded by scarcity of water.

In Queensland during the early months of 1926 sapphires to the value of £6,799 were purchased by the Government under the gem pool scheme from miners on the Anakie field. Fancy stones occasionally bring high prices, an orange yellow which cut at 31 carats, valued at £300, being found in 1925. Amongst good stones found in 1926 were a golden-yellow, valued at £30, another at £60, and a blue weighing 3 ozs, 4 dwt. The latter was valued at £60, and was the largest blue sapphire found on the field for several years. There is a lapidary on the Anakie field, but many stones are sent away for cutting.

Sapphires are plentifully found in the tin drifts of the Ringarooma and Portland districts in Tasmania, but the stones are, as a rule, small and not worth saving.

3. Precious Opal.—The estimated value of the opal won in New South Wales during the year 1926 was £11,485, of which gem to the value of £6,525 was obtained on the Lightning Ridge field, £4,948 on the South Grawin field about 30 miles from Lightning Ridge, while a small quantity was won on the old Rocky Bridge field near Trunkey. Some very fine stones are at times obtained, one weighing 5 ozs. and valued at £300 being recovered in 1911. Occasionally, black opals of very fine quality are found, one specimen from the Wallangulla field, weighing 6½ carats being sold in 1910 for £102, while in the early part of 1920 a specimen realized £600. It is stated that this locality is the only place in the world where the "black" variety of the gem has been found. The total value of opal won in New South Wales since the year 1890 is estimated at £1,561,000, but it is a well known fact that fine pieces of the gem have been found and sold privately without notification to the Mines Department.

Small quantities of precious opal are found in the Beechworth district in Victoria.

The opaliferous district in Queensland stretches over a considerable area of the western interior of the State, from Kynuna and Opalton as far down as Cunnamulla. The yield in 1926 was estimated at £600, and up to the end of that year at about

£183,000. These figures are, however, merely approximations, as large quantities of opal, of which no record is obtained, are disposed of privately. At present the industry, which is not followed by practical miners, suffers from the peculiar disability that in good seasons there is plenty of work available on the pastoral stations, and most men prefer this to the uncertain results obtainable by fossicking, while in dry seasons, when constant work is not obtainable, the search for opal is blocked by the absence of grass and water on the fields.

At the Coober Pedy opal field situated in the Stuart Range in South Australia, between 50 and 70 miners were engaged in 1926, the estimated value of the production being £10,000. The field is extremely prolific, and only a small portion of the known opal-bearing area has been tested.

According to a report a few years ago by the Australian Trade Commissioner in the East there is a good sale for the gems in China. It is stated that there is no difficulty in cutting and polishing, as the Chinese method of dealing with jade, dating back many centuries, can also be applied to opal.

4. **Other Gems.**—Various other gems and precious stones have from time to time been discovered in the different States, the list including agates, amethysts, beryls, chiastolite, emeralds, garnets, olivines, moonstones, rubies, topazes, tourmalines, turquoises, and zircons.

§ 15. Numbers Engaged, Wages Paid, and Accidents in Mining.

1. **Total Employment in Mining.**—The number of persons engaged in the mining industry in Australia fluctuates according to the season, the price of industrial metals, the state of the labour markets, and according to the permanence of new finds, and the development of the established mines. During the year 1926 the number so employed was as follows :—

NUMBER OF PERSONS ENGAGED IN MINING, 1926.

State.	Number of Persons engaged in Mining for—						Total.
	Gold.	Silver, Lead, and Zinc.	Copper.	Tin.	Coal.	Other.	
New South Wales ..	808	5,924	31	1,235	24,781	1,962	34,741
Victoria	1,967	..	..	..	2,939	112	5,018
Queensland	321	390	270	714	3,020	409	5,124
South Australia	26	25	26	..	..	886	963
Western Australia ..	4,488	138	8	78	686	39	5,437
Tasmania	107	523	697	1,057	348	1,221	3,953
Northern Territory ..	26	2	..	112	..	23	163
Australia	7,743	7,002	1,032	3,196	31,774	4,652	55,399

Included in the figures for "other" in South Australia were 423 engaged in mining for iron, 160 gypsum miners, 181 salt gatherers, and 60 opal miners. The Tasmanian figures include 404 osmiridium miners and 352 zinc miners, and those for the Northern Territory were mica miners.

The following table shows the number of persons engaged in mining in Australia during each of the years 1891, 1901, and 1926, together with the proportion of the total population so engaged :—

NUMBER ENGAGED IN MINING PER 100,000 OF POPULATION, 1891, 1901, AND 1926.

State.	1891.		1901.		1926.	
	Miners employed.	No. per 100,000 of Population.	Miners employed.	No. per 100,000 of Population.	Miners employed.	No. per 100,000 of Population.
New South Wales	30,604	2,700	36,615	2,685	34,741	1,493
Victoria	24,649	2,151	28,670	2,381	5,018	296
Queensland	11,627	2,934	13,352	2,664	5,124	585
South Australia	2,683	834	7,007	1,931	963	172
Western Australia	1,269	2,496	20,895	11,087	5,437	1,450
Tasmania	3,988	2,695	6,923	4,017	3,953	1,871
Northern Territory ..	..	..	..	..	163	4,329
Australia	74,820	2,341	113,462	2,992	55,399	916

The general falling-off since 1901 is largely due to the causes mentioned in §1.6 *ante.*

2. **Wages Paid in Mining.**—Information regarding rates of wages paid in the mining industry, which in earlier issues of the Year Book was given in this chapter, is now contained in the Labour Report issued by this Bureau.

3. **Accidents in Mining, 1926.**—The following table gives particulars of the number of men killed and injured in mining accidents during the year 1926 :—

MINING ACCIDENTS, 1926.

Mining for—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Australia.
				KILLED.				
Coal	25	1	2	..	..	..	..	28
Copper ..	..	..	..	..	..	..	..	..
Gold ..	..	5	1	..	7	1	..	14
Silver, lead, and zinc ..	14	..	..	..	..	1	..	15
Tin	1	..	..	..	..	2	..	3
Other minerals	2	1	1	1	..	..	..	5
Total ..	42	7	4	1	7	4	..	65
				INJURED.				
Coal	102	6	88	..	89	6	..	291
Copper ..	..	..	12	..	..	5	..	17
Gold ..	..	14	3	..	286	2	..	305
Silver, lead, and zinc ..	46	..	5	..	..	12	..	63
Tin	1	..	..	..	..	7	1	9
Other minerals	5	..	..	14	..	6	..	25
Total ..	154	20	108	14	375	38	1	710

The number killed in mining accidents in 1925 was considerably less than that for 1921 when 132 deaths were recorded, the figures for the earlier year being swollen by the 75 fatalities in the Colliery disaster at Mount Mulligan in Queensland.

§ 16. Government Aid to Mining.

1. **Commonwealth.**—Assistance to mining is given by the Commonwealth under the provisions of the *Precious Metals Prospecting Act* 1926, and the *Petroleum Prospecting Act* 1926.

The first-mentioned Act provides for a sum of £40,000, of which £15,000 is to be expended in the Northern Territory, and the balance is to be allocated to the States in such proportions as the Minister determines.

Under the Petroleum Prospecting Act a trust account of £60,000 was established to assist in the search for oil. The Minister was authorized to make advances out of the money standing to the credit of this account to persons or companies engaged in the search for oil, and to assist persons, companies, or State Governments to make geological surveys.

2. **New South Wales.**—The chief aid given in this State is in the direction of assistance to prospectors. Up to the end of 1926 the total sum expended in this manner amounted to £574,109, of which £9,084 was advanced in 1926. A sum of £1,000 was made available during the year for the purpose of assisting in the erection of crushing batteries or reduction plants, but no advances were made therefrom. The reward for the discovery of new mineral fields within the State has been increased from £500 to £1,000, with provision for sums of £250 and £500 in respect of fields not large enough to qualify for the full amount, and the conditions have been made more liberal. A sum of £5,000 was made available by the Commonwealth Government to assist in the search for precious metals in the event of the prospecting vote becoming exhausted within the financial year.

3. **Victoria.**—During the year 1926 expenditure in connexion with mining development amounted to £25,008, of which £3,973 represented advances to miners, £3,652 aid to mining companies, while £11,483 was expended on boring, £611 on covering abandoned shafts, £2,956 on testing plants, and £2,333 on geological surveys.

4. **Queensland.**—State assistance to the mining industry in 1925–26 amounted to £15,694, of which £2,279 consisted of loans in aid of deep sinking; £9,533 grants in aid of prospecting, and £3,882 in aid of roads and bridges to gold and mineral fields and water supply. In addition, a sum of £4,540 was expended in loans under the Act of 1906, £40,881 on State Coal Mines, £6,475 in aid of mining, and £10,000 on State Smelting Works.

During the year the Chillagoe State Smelters produced 3,599 tons of lead bullion containing 923 ozs. of gold, 261,332 ozs. silver, and 3,508 tons of lead, in addition to 606 tons of blister copper containing 142 ozs. gold, 48,097 ozs. silver, and 589 tons copper. Four State batteries were in operation during 1926 as follows, the works at Irvinebank producing 151 tons of tin concentrates; 456 ozs. of gold were extracted by the battery at Kidston, which was not fully occupied owing to insufficient ore supplies and shortage of water; at Charters Towers parcels of ore were treated for miners and prospectors; and at Bamford tin crushing was carried on intermittently for a return of 10½ tons of black tin. The State Assay Office at Cloncurry, in addition to free assays, dealt with 487 parcels of samples aggregating 5,840 tons.

5. **South Australia.**—Aid is given to the mining industry under the terms of the Mining Act of 1893, and previous measures. Up to the end of 1926 the total amount of subsidy paid was £67,679, of which £13,375 has been repaid, and £4,549 written off, leaving a debit of £49,755. Portion of this amount is represented by machinery that has fallen into the hands of the Government. Repayments must be provided from profits, but in only two instances have the profits enabled a full return to be made. During the year 1926 assays and pan tests numbering 308 were made by State batteries and cyanide works of small parcels of ore or tailings received from prospectors. Thirty-four parcels of ore weighing 691 tons were treated for a return of 861 ozs. gold valued at £3,000.

6. **Western Australia.**—Under the Mining Development Act of 1902 assistance was granted in 1926 in accordance with the subjoined statement :—Advances in aid of mining work and equipment of mines with machinery, £10,971 ; aid to prospectors, £4,800 ; subsidies paid on stone crushed for the public, £149 ; making a total of £15,920. In addition, a sum of £49,503 was charged against the vote on account of rebates to the Gold-fields Water Supply Branch, and other assistance amounted to £14,184. The receipts under the Act, exclusive of interest payments, came to £8,336, of which £4,737 consisted of refunds of advances. The industry has been further assisted by Government guarantees to banks on behalf of various companies, and at the end of 1926 the liability in this respect amounted to £54,500.

In 1926 there were 29 State batteries in operation. The amount expended thereon up to the end of 1926 was £91,981 from revenue and £316,463 from loan, giving a total of £408,444. During the year receipts amounted to £19,269, and working expenditure to £29,648. The total value of gold and tin recovered to the end of 1926 at the State plants was £6,033,386, resulting from the treatment of 1,436,980 tons of gold ore and 80,728 tons of tin ore, together with a small amount from residues. Free assays and determinations of mineral values for prospectors are made at the Kalgoorlie School of Mines.

7. **Tasmania.**—In the Aid to Mining area at Zeehan the expenditure in 1926 amounted to £1,606, of which £534 represented salaries and wages, £835 advances to prospectors, and £230 a loan to a gold mining company. The amount received from ore sales was £1,863, of which £1,726 was paid to tributers. Receipts amounted to £1,255, included in which was a sum of £1,000 received from the Commonwealth Government.

Tributers' assays are made at a nominal charge, and all tribute surveys are carried out free of charge by the Assay and Survey Office at Zeehan.

8. **Northern Territory.**—During the year 1925–26 a sum of £339 was expended on State aid to mining, about two-thirds of the amount being granted to the Hidden Valley Battery Syndicate, and the balance divided amongst 7 prospectors.

The Government maintains a battery at Marranboy, and the Government Assayer makes free assays for prospectors, and arranges for the sampling, storage, and sale of ores.

§ 17. Commonwealth Government Control of Industrial Metals.

The proclamation under the Customs Act prohibiting the exportation of metals without the consent of the Minister for Trade and Customs is still in force, but consent is granted in every case where the contract relating to the sale of the metals has been approved.

§ 18. Metallic Contents of Ores, etc., Produced and Exported.

1. **Local Production.**—According to returns compiled from various sources by the Australian Mines and Metals Association the quantities of the principal metals (exclusive of gold) extracted in Australia during the five years 1922 to 1926 were as follows :—

REFINED METALS PRODUCED IN AUSTRALIA, 1922 TO 1926.

Metal.		1922.	1923.	1924.	1925.	1926.
Silver ..	.. ozs.	7,896,052	7,645,689	7,631,213	8,573,506	8,946,218
Lead, pig	.. tons	105,528	118,513	126,625	146,129	150,460
Zinc ..	.. tons	23,724	41,153	46,372	45,698	47,356
Copper ..	.. tons	11,524	17,825	14,100	10,984	11,148
Tin ..	.. tons	2,657	3,053	3,167	3,171	3,188

The local production of pig iron during the last five years ranged between 330,000 tons in 1923, and 439,000 tons in 1926.

2. **Metallic Contents of Ores, Concentrates, etc., Exported.**—The estimated metallic contents of ores, concentrates, etc., exported during the five years 1922 to 1926 are given in the following table :—

METALLIC CONTENTS OF ORES, CONCENTRATES, ETC., EXPORTED, 1922 TO 1926.

Metal.		Contained in—	1922.	1923.	1924.	1925.	1926.
Silver	ozs.	Lead—Silver—Gold Bullion	165,290	283,453	158,361	189,223	..
		Lead Concentrates and Ores	281,728	1,298,750	90,360	850,552	190,647
		Zinc Concentrates and Ores	3,390,964	3,526,774	1,941,507	1,270,166	1,206,313
		Copper Ores	12,261	1,378	51,942	..	..
		Total	3,850,243	5,110,355	2,242,170	2,309,941	1,396,960
Lead	tons	Lead—Silver—Gold Bullion	1,790	3,564	1,808	2,751	2,483
		Lead Concentrates and Ores	2,959	18,572	4,852	19,651	7,174
		Zinc Concentrates and Ores	19,910	425	19,859	12,423	13,943
		Total	24,659	22,561	26,519	34,825	23,600
Zinc	tons	Lead Concentrates and Ores	..	..	384	366	529
		Zinc Concentrates and Ores	135,690	146,693	122,305	79,996	94,043
		Total	135,690	146,693	122,689	80,362	94,572
Copper	tons	Ores, Matte, etc. ..	326	2,182	875	864	1,112
Tin	tons	Concentrates and Ores ..	..	..	4	..	1

§ 19. Oversea Exports of Ores, Metals, etc.

The following table shows the quantity and value of the principal oversea exports of ores, concentrates, and metals, the produce of Australia, together with the countries to which the respective products were forwarded, for the year 1926–27:—

OVERSEA EXPORTS OF AUSTRALIAN ORES, METALS, ETC., 1926-27.

Article.	Total Exports.	Exports to—						
		United Kingdom.	United States.	Belgium.	Germany.	Japan.	New Zealand.	Other Countries.
				QUANTITY.				
	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.	cwt.
Ores—								
Alunite ..	25,600	25,600	..	..	..	..	..	..
Silver and Silver-lead	118,740	93	..	83,975	33,678	..	..	994
Concentrates— ..								
Silver and Silver-lead	501,950	..	..	434,863	63,835	..	..	(e) 3,252
Zinc	1,999,675	1,732,441	..	38,794	228,440	..	..	..
Cadmium—Blocks, Ingots, etc. ..	2,854	2,489	..	..	..	145	..	(a) 220
Copper—								
Matte	57,305	3	5,274	28,021	24,007	..	..	..
Ingot	25,630	20,400	..	..	..	..	130	(b) 5,100
Tin—Ingot ..	37,206	14,433	18,480	..	..	..	4,276	17
Lead—								
Matte	..	..	..	..	..	..	..	..
Pig	..	..	..	..	..	..	..	..
Zinc—Bars, Blocks, etc.	536,563	153,031	..	15,001	155,039	187,969	421	(d) 25,102
	oz.	oz.	oz.	oz.	oz.	oz.	oz.	oz.
Platinum, Osmium, etc.	1,494	498	682	..	193	..	..	(c) 121
Gold—								
Matte	358	358	..	..	..	..	..	..
Bar, Dust, etc. ..	156,330	770	290	..	..	..	..	(f) 155,270
Silver—								
Matte	39,148	39,148	..	..	..	..	..	..
Bar, Ingot, etc. ..	7,676,539	2,830	..	..	..	..	1,953	(g) 7,671,756
				VALUE—£.				
Ores—								
Alunite	5,320	5,320	..	..	..	..	..	..
Silver and Silver-lead	99,567	40	..	80,708	17,856	..	..	963
Concentrates—								
Silver and Silver-lead	429,429	..	..	367,756	58,201	..	..	3,472
Zinc	548,101	441,407	..	16,976	89,718	..	..	..
Cadmium—Blocks, Ingots, etc. ..	28,164	24,082	..	..	..	1,642	..	2 440
Copper—								
Matte	78,984	8	5,907	46,171	26,898	..	..	..
Ingot	81,923	64,690	..	..	..	..	495	16,738
Tin—Ingot ..	549,559	213,984	271,843	..	..	..	63,463	269
Lead—								
Matte	..	..	..	..	..	..	..	..
Pig	..	..	..	..	..	..	..	..
Zinc—Bars, Blocks, etc.	926,131	261,450	..	26,250	261,750	332,288	838	43,555
Platinum, Osmium, etc.	25,678	7,535	12,177	..	3,600	..	..	2,366
Gold—								
Matte	1,362	1,362	..	..	..	..	..	..
Bar, Dust, etc. ..	609,167	3,214	590	..	..	..	...	605,363
Silver—								
Matte	4,563	4,563	..	..	..	..	..	..
Bar, Ingot, etc. ..	911,107	330	..	..	..	..	235	910,542

(a) Sweden. (b) India. (c) France, 120 oz. (d) Hong Kong, 500 cwt.; India, 14,601 cwt.; France, 10,001 cwt. (e) Netherlands. (f) India, 155,267 oz. (g) Ceylon, 119,278 oz.; India, 7,545,974 oz.; Fiji, 6,504 oz.

CHAPTER XXII.

MANUFACTURING INDUSTRY.

[NOTE.]—For the year 1922-23 the Queensland, Western Australian and Tasmanian year ended 31st December, 1922, and that of the three remaining States ended 30th June. six months later. In 1923-24 Tasmania adopted the year ended 30th June, and Queensland fell into line during 1924–25. Western Australia made the change over in 1925–26, but included particulars for the eighteen months ended 30th June, 1926.

In all tables relating to employees—except where specially mentioned—" Number of Employees " includes working proprietors.

§ 1. Number and Classification of Factories.

1. **General.**—The number of factories in each State does not necessarily furnish an accurate indication of the extent or progress of manufacturing throughout Australia, since the larger establishments in many cases tend to absorb smaller enterprises, while on the other hand new factories are constantly springing up, and small plants are as numerous as large ones.

2. **Number of Factories in each State, 1922–23 to 1926–27.**—The following table gives the number of factories in each State for the years 1922-23 to 1926-27 :—

FACTORIES.—NUMBER IN EACH STATE, 1922–23 TO 1926–27.

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1922–23 ..	6,702	7,096	1,878	1,609	1,199	689	19,173
1923–24 ..	7,321	7,289	1,912	1,698	1,188	781	20,189
1924–25 ..	7,906	7,425	1,890	1,711	1,188	675	20,795
1925–26 ..	8,196	7,461	1,897	1,791	1,170	727	21,242
1926–27 ..	8,222	7,690	1,877	1,807	1,216	767	21,579

(a) See general note above.

3. **Classification of Factories, Australia, 1922–23 to 1926–27.**—The following table shows the number of factories in Australia for each year from 1922–23 to 1926–27 classified in the groups agreed upon by the Conferences of Statisticians in 1902 and 1906. Details in regard to some of the principal industries in these groups will be found in § 9 hereinafter :—

FACTORIES.—CLASSIFICATION, AUSTRALIA, 1922–23 TO 1926–27.

Class of Industry.	1922–23. (a)	1923–24. (a)	1924–25. (a)	1925–26. (a)	1926–27.
	No.	No.	No.	No.	No.
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	810	799	780	751	710
II. Treating oils and fats, animal, vegetable, etc.. .	97	99	98	98	98
III. Processes in stone, clay, glass, etc.	782	845	871	900	910
IV. Working in wood	2,236	2,497	2,507	2,552	2,500
V. Metal Works, machinery, etc.	2,349	2,575	2,600	2,656	2,650
VI. Connected with food and drink, etc. ..	2,635	2,702	2,756	2,840	2,869
VII. Clothing and textile fabrics, etc.	4,225	4,408	4,616	4,635	4,757
VIII. Books, paper, printing and engraving ..	1,347	1,423	1,477	1,511	1,533
IX. Musical instruments, etc.	59	50	55	48	55
X. Arms and explosives	14	15	13	12	12
XI. Vehicles and fittings, saddlery and harness, etc.	1,913	2,189	2,338	2,499	2,626
XII. Ship and boat building and repairing ..	81	88	87	89	88
XIII. Furniture, bedding, and upholstery	1,010	1,160	1,192	1,223	1,273
XIV. Drugs, chemicals, and by-products	327	323	340	333	333
XV. Surgical and other scientific instruments ..	81	84	92	93	99
XVI. Jewellery, timepieces, and plated ware ..	254	258	262	270	269
XVII. Heat, light, and power	590	435	448	436	451
XVIII. Leatherware, n.e.i.	118	126	121	122	(b) 279
XIX. Other Industries, n.e.i.	245	113	142	174	67
Total	19,173	20,189	20,795	21,242	21,579

(a) See general note above. (b) Includes Rubber Goods formerly in Class XIX., Other Industries, n.e.i.

For the purpose of the returns in the above table the definition of a factory adopted at the Conference of Statisticians in 1902 is used, viz., "Any factory, workshop or mill where four or more persons are employed or power is used."

The expansion in the number of factories in Australia has been particularly marked during recent years. More than 600 additional establishments have been added to the total number in each of the past four years. As previously pointed out, however, any increase or decrease in the number of factories from year to year does not necessarily indicate a change in the position of the industry.

4. Classification of Factories, States, 1926–27.—The following table shows the number of factories in each State during 1926–27 classified according to the nature of the industry :—

FACTORIES.—CLASSIFICATION, STATES, 1926–27.

Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
	No.	No.	No.	No.	No.	No.	No.
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	220	241	40	93	43	73	710
II. Treating oils and fats, animal, vegetable, etc.	39	31	11	11	5	1	98
III. Processes in stone, clay, glass, etc.	403	277	45	109	55	21	910
IV. Working in wood	949	680	331	159	152	229	2,500
V. Metal works, machinery, etc. ..	1,001	1,024	185	245	155	40	2,650
VI. Connected with food and drink, etc.	970	732	491	335	226	115	2,869
VII. Clothing and textile fabrics, etc.	1,832	2,087	252	319	178	89	4,757
VIII. Books, paper, printing, and engraving	600	571	138	108	95	21	1,533
IX. Musical instruments, etc. ..	29	19	1	6	..	..	55
X. Arms and explosives	3	8	..	1	..	..	12
XI. Vehicles and fittings, saddlery and harness, etc.	1,072	948	169	203	138	96	2,626
XII. Ship and boat building and repairing	48	13	9	7	6	5	88
XIII. Furniture, bedding and upholstery	455	496	107	104	70	41	1,273
XIV. Drugs, chemicals, and by-products	150	125	6	23	15	14	333
XV. Surgical and other scientific instruments	30	44	11	6	8	..	99
XVI. Jewellery, timepieces and plated ware	94	117	14	23	12	9	269
XVII. Heat, light, and power ..	187	129	48	33	42	12	451
XVIII. Rubber Goods and Leatherware, n.e.i.	103	130	13	20	12	1	279
XIX. Other Industries n.e.i... ..	37	18	6	2	4	..	67
Total	8,222	7,690	1,877	1,807	1,216	767	21,579

§ 2. Classification of Factories according to Number of Employees.

1. States, 1926–27.—A more satisfactory method of measuring the importance of the manufacturing industry in Australia may, perhaps, be obtained by grouping the factories according to the average number of employees therein.

The following table shows, for each State, the number of factories classified according to the number of hands employed, and the average number of hands employed therein, during 1926–27 :—

FACTORIES.—CLASSIFICATION ACCORDING TO NUMBER OF EMPLOYEES, 1926–27.

No. of Persons Employed in each Factory.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	NUMBER OF FACTORIES.						
Under 4 ..	2,253	2,051	364	335	373	173	5,549
4 ..	818	811	142	153	84	87	2,095
5 to 10 ..	2,325	2,215	544	626	376	295	6,381
11 to 20 ..	1,188	1,125	347	310	160	104	3,234
21 to 50 ..	976	900	282	234	137	70	2,599
51 to 100 ..	375	340	93	94	59	27	988
Over 100 ..	287	248	105	55	27	11	733
Total ..	8,222	7,690	1,877	1,807	1,216	767	21,579

FACTORIES.—CLASSIFICATION ACCORDING TO NUMBER OF EMPLOYEES, 1926–27—*continued.*

AVERAGE NUMBER OF HANDS EMPLOYED.

No. of Persons Employed in each Factory.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
Under 4 ..	4,550	4,315	789	764	757	387	11,562
4 ..	3,272	3,244	568	612	336	348	8,380
5 to 10 ..	16,053	15,465	3,895	4,347	2,541	2,088	44,389
11 to 20 ..	17,217	16,479	5,073	4,593	2,359	1,493	47,214
21 to 50 ..	30,982	28,774	8,687	7,482	4,415	2,138	82,478
51 to 100 ..	25,983	24,177	6,595	6,214	3,974	1,918	68,861
Over 100 ..	85,136	69,185	22,526	18,152	6,042	3,322	204,363
Total ..	183,193	161,639	48,133	42,164	20,424	11,694	467,247

2. **Australia, 1922–23 to 1926–27.**—A satisfactory feature disclosed by the classification in the following table is the continued growth of the larger factories, the average number employed in establishments with more than 100 hands increasing from 257 to 279 during the past four years :—

FACTORIES.—CLASSIFICATION ACCORDING TO NUMBER OF EMPLOYEES, AUSTRALIA, 1922–23 TO 1926–27.

Year.(*a*)	Establishments Employing on the Average—							
	20 hands and under.		21 to 100 hands.		101 hands and upwards.		Total.	
	Establishments.	Hands.	Establishments.	Hands.	Establishments.	Hands.	Establishments.	Hands.
1922–23—								
Number	15,176	104,545	3,337	137,998	660	169,867	19,173	412,410
Average per establishment	..	6.89	..	41.35	..	257.37	..	21.51
Percentage on total ..	79.15	25.35	17.41	33.46	3.44	41.19	100.00	100.00
1923–24—								
Number	16,086	109,673	3,421	141,549	682	178,768	20,189	429,990
Average per establishment	..	6.82	..	41.38	..	262.12	..	21.30
Percentage on total ..	79.68	25.51	16.94	32.92	3.38	41.57	100.00	100.00
1924–25—								
Number	16,672	110,884	3,428	141,773	695	187,292	20,795	439,949
Average per establishment	..	6.65	..	41.36	..	269.48	..	21.16
Percentage on total ..	80.17	25.20	16.49	32.23	3.34	42.57	100.00	100 00
1925–26—								
Number	17,053	111,653	3,465	143,724	724	195,543	21,242	450,920
Average per establishment	..	6.55	..	41.48	..	270.09	..	21.28
Percentage on total ..	80.28	24.76	16.31	31.87	3.41	43.37	100.00	100.00
1926–27—								
Number	17,259	111,545	3,587	151,339	733	204,363	21,579	467,247
Average per establishment	..	6.46	..	42.19	..	278.80	..	21.65
Percentage on total ..	79.98	23.87	16.62	32.39	3.40	43.74	100.00	100.00

(*a*) See general note on first page of this Chapter.

§ 3. Power used in Factories.

1. **States, 1926–27.**—The following table shows the number of factories using steam, gas, oil, electricity, or water, and the horse-power of engines or motors during 1926–27 :—

FACTORIES.—HORSE-POWER OF ENGINES USED, 1926–27.

State.	Number of Establishments.			Actual Horse-power of Engines Used.					
	Using Machinery worked by Steam, Gas, Oil, Electricity, or Water.	Others.	Total.	Steam.	Gas.	Oil.	Electricity.	Water.	Total.
	No.	No.	No.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
N.S.W. ..	7,395	827	8,222	331,036	13,896	8,778	204,094	1,041	558,845
Victoria ..	6,620	1,070	7,690	268,061	13,548	10,024	123.359	(*a*)	414,992
Queensland ..	1,622	255	1,877	111,933	15,521	3,991	28,823	52	160,320
S. Australia ..	1,537	270	1,807	97,362	6.524	6,642	35.617	8	146,153
W. Australia ..	1,045	171	1,216	38,972	5,889	1,860	18,501	..	65,222
Tasmania ..	697	70	767	5.901	344	1,164	51,395	70,780	129,584
Australia ..	18,916	2,663	21,579	853,265	55,722	32,459	461.789	71,881	1.475.116

(*a*) Statistics of Water Power not collected.

The utilization of mechanical power in factories is greatest in New South Wales where the largest number of industries requiring a considerable amount of power is located. Victoria, on the other hand, has the largest number of establishments, such as those connected with clothing and textile fabrics, wherein much less power is utilized.

The number of establishments in Australia during 1926–27 using steam, gas, oil, electricity, or water was 18,916. or 87.66 per cent. of the total; while 2,663 establishments, representing 12.34 per cent., used no mechanical power. The total actual horse-power in use was 1,475,116, distributed in the following proportions :—Steam, 57.84 per cent.; gas, 3.78 per cent.; oil, 2.20 per cent.; electricity, 31.31 per cent.; and water, 4.87 per cent.

2. **Australia, 1922–23 to 1926–27.**—The following table shows the horse-power of engines used in connexion with factories in Australia during each of the last five years :—

FACTORIES.—HORSE-POWER OF ENGINES USED, AUSTRALIA, 1922–23 TO 1926–27.

Year (*a*)	Number of Establishments.			Actual Horse-power of Engines Used.					
	Using Machinery worked by Steam, Gas, Oil, Electricity, or Water.	Others.	Total.	Steam.	Gas.	Oil.	Electricity.	Water.	Total.
	No.	No.	No.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
1922–23 ..	15,951	3,222	19,173	475,917	59,702	12,240	283,850	35,732	867,441
1923–24 ..	17,056	3,133	20,189	633,683	60,237	16,277	344,085	56,492	1,110,774
1924–25 ..	17,717	3,078	20,795	715,475	59,980	17,232	394,381	73,008	1,260,076
1925–26 ..	18,358	2,884	21,242	753,010	60,645	24,116	425,417	72,014	1,335,202
1926–27 ..	18,916	2,663	21,579	853,265	55,722	32,459	461,789	71,881	1,475,116

(*a*) See general note on first page of this Chapter.

The growth of electrical power has been one of the chief factors in the rapid increase of mechanical power which has taken place in factories during recent years. From 72,250 horse-power in 1913, or roughly one-sixth of the total horse-power of engines used, it has increased to 461,789 horse-power, or one-third of the total installations in 1926–27. Steam power continues to expand with the development of the larger industries, but the major portion of the quantity recorded is used for the generation of electric light and power. During the past four years an average of 151.919 horse-power has been added each year to the plant actually in use.

3. Classes of Industry, States, 1926–27.—The following table gives a classification of the actual horse-power of engines used in factories of different descriptions in each State during 1926–27 :—

FACTORIES.—HORSE-POWER OF ENGINES USED IN EACH CLASS, 1926–27.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.	H.P.
I. Treating raw material, product of agricultural and pastoral pursuits, etc. ..	8,033	9,029	1,676	1,977	726	727	22,168
II. Treating oils and fats, animal, vegetable, etc. ..	2,305	1,503	838	506	334	21	5,507
III. Processes in stone, clay, glass, etc.	29,415	20,758	3,683	5,989	2,773	3,910	66,528
IV. Working in wood	26,325	18,713	11,897	4,332	9,347	4,465	75,079
V. Metal works, machinery, etc.	100,435	30,995	10,714	9,968	5,331	37,865	195,308
VI. Connected with food and drink, etc.	47,944	47,539	53,985	12,413	8,038	4,436	174,355
VII. Clothing and textile fabrics, etc.	14,176	24,834	2,331	1,591	975	1,851	45,758
VIII. Books, paper, printing, and engraving	15,255	8,822	2,209	1,968	1,364	336	29,954
IX. Musical instruments, etc. ..	1,585	376	3	82	..	..	2,046
X. Arms and explosives ..	525	689	..	4	..	..	1,218
XI. Vehicles and fittings, saddlery and harness, etc. ..	5,611	4,859	982	3,932	642	357	16,383
XII. Ship and boat building and repairing	10,460	1,358	89	508	35	63	12,513
XIII. Furniture, bedding, and upholstery	6,324	4,957	1,506	2,339	968	448	16,542
XIV. Drugs, chemicals, and by-products	4,782	5,308	227	4,945	1,218	232	16,712
XV. Surgical and other scientific instruments	113	89	19	22	16	..	259
XVI. Jewellery, timepieces, and plated ware	487	546	56	137	18	20	1,264
XVII. Heat, light, and power ..	280,556	226,006	69,816	95,370	33,286	74,852	779,886
XVIII. Rubber goods and leatherware, n.e.i.	4,320	8,456	195	65	106	1	13,143
XIX. Other Industries, n.e.i. ..	194	155	94	5	45	..	493
Total	558,845	414,992	160,320	146,153	65,222	129,584	1,475,116

4. Classes of Industry, Australia, 1922–23 to 1926–27.—The following table shows a similar classification of the actual horse-power of engines used in manufacturing industries in Australia during the years 1922–23 to 1926–27 inclusive :—

FACTORIES.—HORSE-POWER OF ENGINES USED, AUSTRALIA, 1922–23 TO 1926–27.

Class of Industry.	1922–23. (a)	1923–24. (a)	1924–25. (a)	1925–26. (a)	1926–27.
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	23,976	24,319	23,225	23,319	22,168
II. Treating oils and fats, animal, vegetable, etc.	3,421	3,848	4,684	4,973	5,507
III. Processes in stone, clay, glass, etc.	42,787	48,614	55,132	59,897	66,528
IV. Working in wood	60,343	68,234	72,935	77,238	75,079
V. Metal works, machinery, etc.	140,009	162,153	167,801	187,129	195,308
VI. Connected with food and drink, etc. ..	147,160	159,982	160,194	172,519	174,355
VII. Clothing and textile fabrics, etc.	30,382	35,295	36,638	40,469	45,758
VIII. Books, paper, printing, and engraving ..	21,812	26,569	27,700	29,613	29,954
IX. Musical instruments, etc.	888	1,116	1,192	1,550	2,046
X. Arms and explosives	809	1,236	1,339	1,219	1,218
XI. Vehicles and fittings, saddlery and harness, etc.	8,361	11,454	13,084	14,887	16,383
XII. Ship and boat building and repairing ..	11,406	11,247	11,775	11,998	12,513
XIII. Furniture, bedding, and upholstery	9,995	11,338	12,084	14,728	16,542
XIV. Drugs, chemicals, and by-products	11,309	12,378	14,166	15,190	16,712
XV. Surgical and other scientific instruments ..	209	218	290	278	259
XVI. Jewellery, timepieces, and plated ware ..	1,066	1,120	1,251	1,339	1,264
XVII. Heat, light, and power	344,373	522,621	646,605	666,676	779,886
XVIII. Leatherware, n.e.i.	708	760	805	561	(b)13,143
XIX. Other Industries, n.e.i.	8,427	8,272	9,176	11,624	493
Total	867,441	1,110,774	1,260,076	1,335,202	1,475,116

(a) See general note on first page of this Chapter.
(b) Includes Rubber Goods formerly in Class XIX., Other Industries n.e.i.

The actual horse-power of engines used increased in every branch of industry except Class I. Treating raw materials. An apparent decrease is shown for Class XIX. Other Industries, n.e.i., but this is due to the removal of the rubber goods industry from this Class. The industries using the greatest amount of power were Class XVII. Heat, light, and power; Class V. Metal works, machinery, etc.; and Class VI. Connected with food and drink. These three classes, which together accounted for 77.93 per cent. of the total power used in 1926–27 increased their horse-power from 631,542 to 1,149,549 during the four years under review, and are mainly responsible for the development of mechanical power in factories since 1922–23.

§ 4. Employment in Factories.

1. **Total Number Employed.**—Each person employed in and about a factory, in whatever capacity, is now included as a factory employee, consequently every proprietor who works in his own business is counted as an employee, and all "outworkers" (see sub-section 5 (ii) hereinafter) are also included. The individuals embraced may be classed under the following heads:—(i) Working proprietors; (ii) managers and overseers; (iii) accountants and clerks; (iv) engine-drivers and firemen; (v) skilled and unskilled workers in the factories, mills, or workshops; (vi) carters and messengers; and (vii) others.

The following table shows, for each year from 1922–23 to 1926–27 inclusive, (*a*) the average numbers of persons (including both sexes and all ages) employed in manufacturing industries in each State: (*b*) the percentage of the numbers employed in each State on the total numbers employed in Australia; and (*c*) the numbers employed per ten thousand of the population in each State and Australia:—

FACTORIES.—EMPLOYMENT, 1922–23 TO 1926–27.

Year.(*a*)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
AVERAGE NUMBER.							
1922–23 ..	152,266	152,625	43,403	34,695	19,097	10,324	412,410
1923–24 ..	159,674	156,162	44,948	37,275	19,712	12,219	429,990
1924–25 ..	165,760	154,158	48,922	38,353	21,758	10,998	439,949
1925–26 ..	174,101	152,959	50,496	40,051	22,142	11,171	450,920
1926–27 ..	183,193	161,639	48,133	42,164	20,424	11,694	467,247
PERCENTAGE ON AUSTRALIAN TOTAL.							
	%	%	%	%	%	%	%
1922–23 ..	36.92	37.01	10.53	8.41	4.63	2.50	100.00
1923–24 ..	37.13	36.32	10.45	8.67	4.59	2.84	100.00
1924–25 ..	37.68	35.04	11.12	8.72	4.94	2.50	100.00
1925–26 ..	38.61	33.92	11.20	8.88	4.91	2.48	100.00
1926–27 ..	39.21	34.60	10.30	9.02	4.37	2.50	100.00
PER 10,000 OF POPULATION.							
1922–23 ..	701	960	556	676	562	481	734
1923–24 ..	723	961	554	710	566	557	748
1924–25 ..	735	930	586	712	598	505	749
1925–26 ..	757	908	586	726	595	515	753
1926–27 ..	780	944	546	744	539	545	765

(*a*) See general note on first page of this Chapter.

2. Rates of Increase, 1922–1923 to 1926–27.—The following table shows the percentage of increase or decrease on the average number of persons employed for the preceding year in each of the years from 1922–23 to 1926–27.

FACTORY EMPLOYEES.—PERCENTAGE OF INCREASE, 1922–23 TO 1926–27.

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	%	%	%	%	%	%	%
1921–22—1922–23..	2.28	5.35	2.73	11.31	5.35	1.95	4.30
1922–23—1923–24..	4.87	2.32	3.56	7.44	3.22	18.36	4.26
1923–24—1924–25..	3.81	−1.28	8.84	2.89	10.38	−10.00	2.32
1924–25—1925–26..	5.03	−0.78	3.22	4.43	1.76	1.57	2.49
1925–26—1926–27..	5.22	5.67	−4.68	5.28	−7.76	4.68	3.62

NOTE.—The minus sign indicates decrease.

(a) See general note on first page of this Chapter.

3. Employees in Classes of Industry, Australia, 1922–23 to 1926–27.—The following table gives the average numbers of persons employed in factories under each group in Australia during the years 1922–23 to 1926–27 inclusive :—

FACTORY EMPLOYEES.—CLASSES, AUSTRALIA, 1922–23 TO 1926–27.

Class of Industry.	1922–23. (a)	1923–24. (a)	1924–25. (a)	1925–26. (a)	1926–27.
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	11,394	10,842	10,289	10,414	10,323
II. Treating oils and fats, animal, vegetable, etc...	3,173	3,424	3,342	3,350	3,243
III. Processes in stone, clay, glass, etc.	18,666	20,256	20,342	20,723	21,590
IV. Working in wood	33,102	36,319	36,252	35,812	33,050
V. Metal works, machinery, etc.	78,614	88,213	90,888	96,782	101,711
VI. Connected with food and drink, etc. ..	60,888	61,550	64.712	66,084	64,911
VII. Clothing and textile fabrics, etc.	102,451	100,850	100,830	103,501	111,540
VIII. Books, paper, printing and engraving ..	31,015	32,659	33,043	33,123	33,863
IX. Musical instruments, etc.	1,415	1,357	1,441	1,647	1,892
X. Arms and explosives	433	803	819	870	936
XI. Vehicles and fittings, saddlery and harness, etc.	19,532	22,490	24,234	25,592	28,285
XII. Ship and boat building and repairing ..	6,053	5,794	6,230	6,107	6,298
XIII. Furniture, bedding, and upholstery	12,608	15,230	15,697	15,943	16,832
XIV. Drugs, chemicals, and by-products	6,884	7,215	7,511	7,747	8,196
XV. Surgical and other scientific instruments ..	582	608	690	697	726
XVI. Jewellery, timepieces, and plated ware .	2,489	2,447	2,365	2,343	2,209
XVII. Heat, light, and power	14,112	12,967	13,735	11,534	11,956
XVIII. Leatherware, n.e.i.	2,476	2,576	2,506	2,780	(b)8,807
XIX. Other Industries n.e.i.	6,523	4,390	5,023	5,871	879
Total	412,410	429,990	439,949	450,920	467,247

(a) See general note on first page of this Chapter.
(b) Includes Rubber Goods formerly in Class XIX., Other Industries, n.e.i.

On the average during each of the last four years employment has been found for 13,709 additional persons in the manufacturing industries. The classes responsible for the bulk of the increase were Class V. Metal Works, Class VII. Clothing and Textile Fabrics, Class XI. Vehicles etc., and Class XIII. Furniture, Bedding and Upholstery, in several of the principal industries of which classes considerable development has occurred during the period.

4. Employees in Classes of Industry, States, 1926–27.—The following table gives a classification of employees in manufacturing industries in each State during 1926–27 :—

FACTORY EMPLOYEES.—CLASSES, STATES, 1926–27.

Class of Industry.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Australia.
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	3,698	4,100	725	827	339	634	10,323
II. Treating oils and fats, animal, vegetable, etc.	1,495	941	226	315	225	41	3,243
III. Processes in stone, clay, glass, etc.	10,493	6,117	991	2,370	1,153	466	21,590
IV. Working in wood	10,326	9,146	5,725	2,293	3,358	2,202	33,050
V. Metal works, machinery, etc. ..	47,938	28,576	8,128	10,835	4,269	1,965	101,711
VI. Connected with food and drink, etc.	20,964	18,881	15,534	4,933	2,683	1,916	64,911
VII. Clothing and textile fabrics, etc. ..	38,076	55,101	7,047	5,819	3,305	2,192	111,540
VIII. Books, paper, printing and engraving	13,713	11,619	3,843	2,479	1,524	685	33,863
IX. Musical instruments, etc. ..	1,284	532	10	66	..	..	1,892
X. Arms and explosives	396	537	..	3	..	..	936
XI. Vehicles and fittings, saddlery, and harness, etc.	9,640	8,223	1,672	6,655	1,349	746	28,285
XII. Ship and boat building and repairing	5,457	388	111	291	19	32	6,298
XIII. Furniture, bedding, and upholstery	6,551	5,460	1,725	1,704	1,019	373	16,832
XIV. Drugs, chemicals, and by-products	3,362	2,912	153	1,126	570	73	8,196
XV. Surgical and other scientific instruments	284	269	77	59	37	..	726
XVI. Jewellery, timepieces, and plated ware	798	1,044	112	156	71	28	2,209
XVII. Heat, light, and power	4,661	2,984	1,618	1,975	379	339	11,956
XVIII. Rubber goods and leatherware, n.e.i.	3,579	4,496	399	250	81	2	8,807
XIX. Other Industries, n.e.i.	478	313	37	8	43	..	879
Total	183,193	161,639	48,133	42,164	20,424	11,694	467,247

The largest number employed in any particular class in Australia during 1926–27 was in Class VII., in which there were 111,540 employees, or 23.87 per cent. of the total in all classes. The class affording employment to the smallest number of hands was Class XV., in which there were 726 hands, or 0.15 per cent. of the total. Classes VI., VII., and VIII. include those industries in which female labour is largely employed. (See § 5, 5 hereof.)

5. Employees According to Nature of Employment.—(i) *General.* In the following table the average numbers of persons employed in each State during 1926–27 are classified according to the nature of their employment :—

FACTORY EMPLOYEES.—NATURE OF EMPLOYMENT, 1926–27.

State.	Average Number of Persons Employed.						
	Working Proprietors.	Managers and Overseers.	Accountants and Clerks.	Engine-drivers and Firemen.	Workers, Skilled & Unskilled, in Factory Mill or Workshop. (a)	Carters, Messengers and Others.	Total.
New South Wales ..	7,022	6,359	9,348	3,295	154,545	2,624	183,193
Victoria	7,334	5,580	6,519	2,036	137,617	2,553	161,639
Queensland ..	1,387	1,834	2,588	2,244	36,547	3,533	48,133
South Australia ..	1,505	1,377	2,624	496	35,413	749	42,164
Western Australia	838	820	1,098	397	16,634	637	20,424
Tasmania ..	574	547	790	300	9,220	263	11,694
Australia ..	18,660	16,517	22,967	8,768	389,976	10,359	467,247

(a) Including Outworkers.

(ii) *Outworkers.* The term "outworker" or "homeworker" has acquired a special meaning in connexion with manufacturing industries, and technically embraces only those to whom work is given out by factory owners to be wrought upon in the employees' own homes. Individuals working for themselves are not included. The following table gives particulars of the average number of outworkers connected with factories in each State during each year from 1922–23 to 1926–27 inclusive :—

FACTORIES.—OUTWORKERS(*a*), 1922–23 TO 1926–27.

Year.(*b*)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
1922–1923 ..	547	1,228	33	84	8	32	1,932
1923–1924 ..	470	870	38	35	9	41	1,463
1924–1925 ..	461	728	32	62	4	19	1,306
1925–1926 ..	403	736	23	83	2	24	1,271
1926–1927 ..	336	592	31	66	7	53	1,085

(*a*) In all tables relating to number of hands employed in factories, outworkers are included.
(*b*) See general note on first page of this Chapter.

The Factories Acts in each State contain provisions regulating the employment of outworkers. Records of outwork, specifying the names and remuneration of workers, and stating the places where the work is done, must be kept by factory proprietors. Fuller information regarding the operation of the Factories Acts will be found in Official Year Book No. 16, pp. 540 to 566.

§ 5. Sex Distribution in Factories.

1. Employment of Females.—In all the States the employment of female labour in factories is regulated by Acts of Parliament. More extended reference to this matter will be found in Official Year Book No. 16, pp. 540 to 566.

2. Distribution of Employees according to Sex.—(i) *General.* In New South Wales the ratio of the number of females employed in factories to the number of males during 1886 was about one to seven ; in 1891 one to six ; in 1903 it became about one to four ; and is now less than one to three. In Victoria the ratio of females to males during the year 1886 was about one to five. Five years later (1891) it was somewhat less, but in 1896 had increased to about one woman to three men, and at present is nearly one to two. In the remaining States the ratio was roughly one female employed to every five males, while that for Australia as a whole was one to three. The employment of women is, however, mainly confined to a few trades.

Increasing activity in the clothing and textile industries is the principal cause of the growth in female employment. Certain occupations are regarded as specially suitable for women, such as clothing and textile manufacture, preparation of food, book-binding, and wrapping and packing connected with various industries. In common also with commercial establishments, a considerable number of factories employ women as clerks and typists.

(ii) *Average Number of Males and Females Employed, 1922–23 to 1926–27.* The following table shows the average number of male and female employees in factories in each State from 1922–23 to 1926–27 :—

FACTORIES.—MALES AND FEMALES EMPLOYED, 1922–23 TO 1926–27.

State.	1922–23.(*a*)	1923–24.(*a*)	1924–25.(*a*)	1925–26.(*a*)	1926–27.
MALES.					
New South Wales	114,970	121,845	126,496	132,239	138,309
Victoria	103,092	107,578	105,984	104,512	108,969
Queensland	35,528	36,788	40,895	42,525	40,493
South Australia	27,988	30,261	31,238	33,117	34,980
Western Australia	15,851	16,439	18,316	18,634	16,799
Tasmania	8,453	10,046	9,016	9,055	9,485
Australia	305,882	322,957	331,945	340,082	349,035
FEMALES.					
New South Wales	37,296	37,829	39,264	41,862	44,884
Victoria	49,533	48,584	48,174	48,447	52,670
Queensland	7,875	8,160	8,027	7,971	7,640
South Australia	6,707	7,014	7,115	6,934	7,184
Western Australia	3,246	3,273	3,442	3,508	3,625
Tasmania	1,871	2,173	1,982	2,116	2,209
Australia	106,528	107,033	108,004	110,838	118,212

(*a*) See general note on first page of this Chapter.

During the years specified in the above table there has been an increase in the number of male factory employees in Australia of 43,153, or an annual average of 10,788, whilst the number of female employees increased by 11,684, or an annual average of 2,921.

(iii) *Average Number of Males and Females Employed per 10,000 of Population, 1922–23 to 1926–27.* The following table shows the average number of male and female employees per 10,000 of the male and female population respectively in each State from 1922–23 to 1926–27 :—

MALE AND FEMALE FACTORY EMPLOYEES PER 10,000 OF MALE AND FEMALE POPULATION RESPECTIVELY, 1922–23 TO 1926–27.

State.	1922–23.(*a*)	1923–24.(*a*)	1924–25.(*a*)	1925–26.(*a*)	1926–27.
MALES.					
New South Wales	1,038	1,081	1,099	1,129	1,156
Victoria	1,307	1,333	1,286	1,246	1,279
Queensland	862	868	929	935	870
South Australia	1,087	1,140	1,141	1,171	1,194
Western Australia	876	883	938	934	827
Tasmania	782	917	830	838	892
Australia	1,070	1,105	1,108	1,111	1,118

(*a*) See general note on first page of this Chapter.

MALE AND FEMALE FACTORY EMPLOYEES PER 10,000 OF MALE AND FEMALE POPULATION RESPECTIVELY—*continued.*

State.	1922–23.(*a*)	1923–24.(*a*)	1924–25.(*a*)	1925–26.(*a*)	1926–27.
FEMALES.					
New South Wales ..	350	350	356	371	390
Victoria	618	593	578	573	613
Queensland	213	215	203	196	183
South Australia	262	274	269	258	263
Western Australia ..	205	202	204	203	207
Tasmania	175	198	181	194	204
Australia	386	380	375	378	396

(*a*) See general note on first page of this Chapter.

3. **Rate of Variation for each Sex.**—The percentages of annual increase or decrease during the years 1922–23 to 1926–27 in the average number of males and females employed in factories are shown below :—

PERCENTAGES OF ANNUAL INCREASE, MALE AND FEMALE FACTORY EMPLOYEES, 1922–23 TO 1926–27.

State.	1921–22—1922–23.(*a*)	1922–23—1923–24.(*a*)	1923–24—1924–25.(*a*)	1924–25—1925–26.(*a*)	1925–26—1926–27.(*a*)
MALES.					
	%	%	%	%	%
New South Wales ..	2.31	5.91	3.82	4.54	4.59
Victoria	5.42	4.35	−1.48	−1.39	4.26
Queensland	1.36	3.54	11.16	3.99	−4.78
South Australia	11.93	8.12	3.23	6.01	5.63
Western Australia ..	2.17	3.71	11.42	1.74	−9.85
Tasmania	−0.84	18.84	−10.26	0.43	4.75
Total	3.95	5.58	2.78	2.45	2.63
FEMALES.					
New South Wales ..	2.14	1.43	3.79	6.62	7.22
Victoria	5.19	−1.92	−0.84	0.57	8.72
Queensland	9.41	3.62	−1.63	−0.70	−4.15
South Australia	8.79	4.58	1.43	−2.54	3.61
Western Australia ..	24.23	0.83	5.16	1.92	3.34
Tasmania	16.79	16.14	−8.79	6.76	4.40
Total	5.29	0.47	0.91	2.62	6.65

NOTE.—The minus sign indicates decrease.

(*a*) See general note on first page of this Chapter.

4. Masculinity of Employees in Factories.—The extent to which females are employed in the factories of Australia may perhaps be more clearly shown by giving the masculinity of employees for each State for a series of years. The following table furnishes particulars for each of the years 1922–23 to 1926–27 inclusive :—

MASCULINITY (*b*) OF FACTORY EMPLOYEES, 1922–23 TO 1926–27.

Year.(*a*)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
1922–23	51.0	35.1	63.7	61.3	66.0	63.8	48.3
1923–24	52.6	37.8	63.7	62.4	66.8	62.0	50.2
1924–25	52.6	37.5	67.2	62.9	68.4	64.0	50.9
1925–26	51.9	36.7	68.4	65.4	68.3	62.1	50.8
1926–27	51.0	34.8	68.3	65.9	64.5	62.2	49.4

(*a*) See general note on first page of this Chapter.
(*b*) Excess of males over females per 100 of both sexes combined.

The ratio of the sexes employed in factories in Australia has shown a tendency towards increased masculinity of late years, but the records of employment for 1925–26 and 1926–27 disclose a check to this tendency owing to the increased employment of women in Victoria and New South Wales. The tables given in the succeeding subsection show that the comparatively high proportions of females have been due not so much to the incursion of female labour into what may be termed men's trades, as to the activity in those trades in which women are ordinarily engaged, more especially in clothing, dressmaking, millinery, etc.

5. Employment of Females in Particular Industries.—The employment of women in manufacturing industries in Australia is mainly confined to a few trades, of which the more important are comprised in Classes VI., VII., and VIII., viz., in connexion with food, drink, etc., clothing and textile fabrics, and books, paper, printing, etc. The following tables show the average number of females employed in each of these classes in each State during 1926–27 and the percentages of the average number so employed on the total average number of females employed in all classes of factories :—

FEMALES EMPLOYED IN PARTICULAR INDUSTRIES, AND PERCENTAGES ON AVERAGE TOTAL EMPLOYED, 1926–27.

Class.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
AVERAGE NUMBER.							
VI. Food, drink, etc.	6,652	5,132	931	868	461	502	14,546
VII. Clothing and textile fabrics ..	26,987	38,912	5,052	4.321	2.416	1.393	79,081
VIII. Books, paper, printing, etc. ..	4,015	3,368	838	741	374	134	9,470
All other classes	7,230	5,258	819	1,254	374	180	15,115
Total	44,884	52,670	7,640	7,184	3,625	2,209	118,212
PERCENTAGES ON AVERAGE TOTAL FEMALE EMPLOYEES.							
VI. Food, drink, etc.	14.82	9.74	12.19	12.08	12.72	22.72	12.30
VII. Clothing and textile fabrics ..	60.13	73.88	66.12	60.15	66.65	63.06	66.90
VIII. Books, paper, printing, etc. ..	8.94	6.40	10.97	10.31	10.32	6.07	8.01
All other classes	16.11	9.98	10.72	17.46	10.31	8.15	12.79
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00

The largest proportion of females is engaged in one or other of the three classes of industry indicated, Class VII. being the most important. The classification of the employment of females in the several industries in that class, and the relation of their number to that of the males so employed, are shown in the following table :—

FEMALES EMPLOYED IN EACH INDUSTRY IN CLASS VII. DURING 1926–27.

Industry.	New South Wales.			Victoria.			Other States.		
	Males.	Females	Femininity. (a)	Males.	Females	Femininity. (a)	Males.	Females	Femininity. (a)
Woollen and tweed mills	979	1,725	27.59	2,972	3,745	11.51	741	906	10.07
Knitting factories ..	780	2,769	56.04	1,100	5,018	64.04	53	300	69,97
Cotton mills ..	331	367	5,16	..	..	..	44	2	-91.30
Boots and shoes ..	3,094	2,375	-13.15	6,595	5,597	- 8.19	1,479	1,077	-15.73
Boot repairing, including bespoke work ..	1,050	21	-96.08	513	18	-93.22	354	20	-89.30
Clothing (tailoring and slop)	2,593	9,242	56.18	2,099	7,083	54.28	1,749	5,643	52.68
Clothing (waterproof and oilskin) ..	22	94	62.07	80	239	49.84	..	..	..
Dressmaking and millinery	134	3,560	92.74	459	8,361	89.59	29	2,508	97.71
Dyeworks and cleaning	265	182	-18.57	165	176	3.23	127	148	7.64
Furriers	248	323	13.13	263	438	24.96	33	78	40.54
Hats and caps ..	624	1,337	36.36	594	1,151	31.92	70	113	23.50
Shirts, ties, and scarves	410	4,537	83.42	588	6,475	83.35	136	2,095	87.81
Rope and cordage ..	240	90	-45.45	512	380	-14.79	117	5	-91.80
Tents and tarpaulins	150	144	- 2.04	134	108	-10.74	120	118	- 0.84
Bags and sacks ..	169	221	13.33	115	123	3.36	129	169	13.42
Total, Class VII. ..	11,089	26,987	41.75	16,189	38,912	41.24	5,181	13,182	43.57

NOTE.—The minus sign denotes excess of males over females.

(a) Excess of females over males per 100 of both sexes combined.

§ 6. Child Labour in Factories.

1. **Conditions of Child Labour.**—The employment of young persons in factories in each State of Australia is regulated by Acts of Parliament, as is the case with the employment of female labour. Reference to the legislation regarding the employment of child labour in factories will be found in Official Year Book No. 16, pp. 540 to 566. The general object of the restrictions imposed is to assure that a proper period shall be devoted to primary education, and that the early years of toil shall not exhaust the worker before the attainment of full growth.

2. **Average Number of Children Employed, 1922–23 to 1926–27.**—In the statistical compilations of the various States the term " child " may be taken to denote any person

under sixteen years of age. The following table shows the average number of children of each sex employed in manufacturing industries in each State during the years 1922–23 to 1926–27 :—

CHILDREN EMPLOYED IN FACTORIES, 1922–23 TO 1926–27.

State.	1922–23.(a)	1923–24.(a)	1924–25.(a)	1925–26.(a)	1926–27.
			MALES.		
New South Wales ..	3,995	4,128	3,968	4,527	4,594
Victoria	4,031	4,057	4,027	3,980	4,567
Queensland	1,119	1,236	1,507	1,566	1,281
South Australia	1,125	1,199	1,080	1,095	1,215
Western Australia ..	452	530	552	682	614
Tasmania	282	360	238	214	311
Australia	11,004	11,510	11,372	12,064	12,582
			FEMALES.		
New South Wales ..	4,288	4,038	4,256	4,688	5,001
Victoria	3,163	3,422	3,223	3,489	4,041
Queensland	969	972	979	1,003	927
South Australia	795	773	839	783	856
Western Australia ..	251	200	254	248	242
Tasmania	266	294	190	191	254
Australia	9,732	9,699	9,741	10,402	11,321
			TOTAL.		
New South Wales ..	8,283	8,166	8,224	9,215	9,595
Victoria	7,194	7,479	7,250	7,469	8,608
Queensland	2,088	2,208	2,486	2,569	2,208
South Australia	1,920	1,972	1,919	1,878	2,071
Western Australia ..	703	730	806	930	856
Tasmania	548	654	428	405	565
Australia	20,736	21,209	21,113	22,466	23,903

(a) See general note on first page of this Chapter.

3. Percentage of Children on Total Number of Employees.—The foregoing table shows a general increase in the number of children employed in factories during the past four years. This increase is greater among the females than is the case with the males, the respective gains being 1,589 and 1,578. Examined in conjunction with the total number of persons employed the percentage of children has varied little since 1922–23.

PERCENTAGE OF CHILDREN ON TOTAL NUMBER OF FACTORY EMPLOYEES, 1922–23 TO 1926–27.

State.	1922–23.(*a*)	1923–24.(*a*)	1924–25.(*a*)	1925–26.(*a*)	1926–27.
	%	%	%	%	%
New South Wales ..	5.44	5.11	4.96	5.29	5.24
Victoria	4.71	4.79	4.70	4.88	5.33
Queensland	4.81	4.91	5.08	5.09	4.59
South Australia	5.53	5.29	5.00	4.69	4.91
Western Australia ..	3.68	3.70	3.70	4.20	4.19
Tasmania	5.31	5.35	3.89	3.63	4.83
Australia	5.03	4.93	4.80	4.98	5.12

(*a*) See general note on first page of this Chapter.

4. **Industries Employing Child Labour.**—The employment of children is largely confined to a limited number of industries, the most important of which are specified in the next table, which shows the average number of children of each sex employed during 1926–27 in the several industries indicated.

CHILDREN EMPLOYED.—VARIOUS INDUSTRIES, 1926–27.

Class.	Industry.	N.S.W.		Victoria.		Q'land.		S. Aust.		W. Aust.		Tas.		Australia.	
		M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
II.	Soap and candles ..	34	33	30	22	7	2	11	20	9	1	1	1	92	79
III.	Bricks, tiles, pottery, and earthenware ..	221	3	70	17	23	2	21	..	15	2	4	..	354	24
IV.	Joinery, boxes, cases, etc.	108	..	109	4	46	2	44	1	18	..	5	..	330	7
,,	Saw mills	63	..	11	..	80	2	17	2	33	..	22	..	226	4
V.	Agricultural implements	23	2	103	11	5	..	34	5	6	..	..	..	171	18
,,	Engineering, ironworks, and foundries ..	342	6	362	16	59	2	115	1	26	2	5	..	909	27
,,	Galvanized ironworking and tinsmithing	175	58	215	32	39	22	56	..	14	1	1	..	500	113
,,	Railway carriage, railway and tramway workshops ..	77	..	181	..	29	..	35	..	5	..	2	..	329	..
,,	Wire working ..	101	..	31	..	3	2	12	..	9	..	..	..	156	2
,,	Electric apparatus ..	177	18	102	5	1	..	18	1	2	1	1	..	301	25
VI.	Meat and fish preserving	1	..	10	..	76	3	..	..	..	..	..	..	87	3
,,	Biscuits	217	213	92	66	18	15	21	17	52	22	..	..	400	333
,,	Confectionery ..	95	286	39	74	37	76	6	46	4	12	35	42	216	536
,,	Jams, pickles, sauces, etc.	60	13	27	15	10	13	12	13	1	1	41	..	151	55
,,	Condiments, coffee, spices, etc. ..	35	40	14	21	..	1	54	9	16	2	..	..	119	73
,,	Tobacco, cigars, etc.	32	135	74	19	..	..	1	3	5	12	..	..	112	169
VII.	Woollen and tweed mills	149	206	399	429	11	44	15	20	16	5	35	92	625	796
,,	Knitting factories ..	42	315	54	459	1	5	2	18	3	8	2	21	104	826
,,	Boots and shoes ..	180	283	404	500	29	81	30	30	40	15	6	8	689	917
,,	Clothing (tailoring and slop)	104	940	88	389	42	205	30	190	14	42	8	18	286	1,784
,,	Dressmaking and millinery	15	481	17	635	..	54	..	152	1	55	1	26	34	1,403
,,	Shirts, ties, scarves, etc.	32	710	36	582	5	227	4	80	1	16	1	16	79	1,631
,,	Hats and caps ..	39	163	37	64	1	5	4	1	..	..	..	..	81	233
,,	Rope and cordage ..	34	17	58	30	12	..	11	..	..	..	..	..	115	47
VIII.	Printing and binding	518	255	411	201	194	50	82	59	72	21	14	10	1,291	596
,,	Paper making, paper boxes, etc. ..	85	263	28	78	7	15	18	56	2	5	..	..	140	417
XI.	Coach and wagon building	22	1	45	..	17	..	9	1	16	..	12	1	121	3
,,	Cycles and motors ..	293	10	268	3	62	2	219	41	60	1	28	..	925	57
XIII.	Billiard tables, cabinet making and furniture	97	..	201	1	67	8	105	2	30	..	20	1	520	12
,,	Bedding, flock, and upholstery ..	22	11	37	..	8	3	17	5	5	1	6	1	95	21
XIV.	Chemicals, drugs, and medicines ..	48	121	27	33	3	11	5	26	5	..	..	2	88	193
XVIII.	Leather belting, etc.	74	69	47	37	14	9	5	29	1	..	..	..	141	144
,,	Rubber goods ..	40	6	52	21	16	26	6	1	4	..	..	..	118	54

5. **Apprenticeship.**—In all the States Acts are in force for the regulation of the age at which children may be employed in gainful occupations. Legislative provision is also made for the regulation of apprenticeship under the various State Factories Acts or Arbitration Acts. These Acts, while laying down general principles, leave to the wages tribunals the actual determination of the conditions under which apprentices may be employed.

§ 7. Salaries and Wages Paid and Value of Production.

[NOTE.]—In all tables relating to Salaries and Wages paid in Factories the amounts given are exclusive of all sums drawn by working proprietors.

1. **General.**—The importance of the manufacturing industries of Australia is indicated by the fact that the total value of the output for 1926–27 was £408,692,838, of which amount the sum of £232,643,518 represents the value of the raw materials used, and £13,724,047 the value of the fuel and light used. The difference between the sum of the two latter amounts and the value of the output, viz., £162,325,273, represents the amount by which the value of the raw materials was enhanced in the process of manufacture. The total amount of salaries and wages paid in factories during 1926–27 was £90,575,166.

2 **Salaries and Wages Paid.**—(i) *Total Amount, 1926–27.* The total amount of salaries and wages paid during the year 1926–27 in various classes of factories in Australia is shown in the following table :—

SALARIES AND WAGES PAID IN FACTORIES, 1926–27.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	808,634	872,454	115,639	148,194	54,637	45,027	2,044,585
II. Treating oils and fats, animal, vegetable, etc. ..	299,020	198,898	49,570	56,880	49,200	10,053	663,621
III. Processes in stone, clay, glass, etc. ..	2,419,319	1,380,768	203,661	533,868	239,594	91,962	4,869,172
IV. Working in wood ..	2,093,941	1,905,530	1,086,566	460,823	719,074	336,068	6,602,002
V. Metal works, machinery, etc. ..	11,480,258	6,461,270	1,858,233	2,534,021	933,021	512,110	23,778,913
VI. Connected with food and drink, etc. ..	4,190,046	3,922,910	2,902,267	961,673	531,861	318,304	12,827,061
VII. Clothing and textile fabrics, etc. ..	5,102,628	7,392,127	866,169	686,636	386,286	245,524	14,679,370
VIII. Books, paper, printing, and engraving	2,899,565	2,353,714	835,030	490,412	320,852	157,175	7,056,748
IX. Musical instruments, etc.	296,341	121,403	1,671	11,474	..	..	430,889
X. Arms and explosives	106,822	117,792	..	533	..	..	225,147
XI. Vehicles and fittings, saddlery and harness, etc. ..	1,720,004	1,547,119	297,361	1,300,313	242,456	110,908	5,218,161
XII. Ship and boat building and repairing	1,416,397	90,672	21,312	73,631	4,135	4,927	1,611,074
XIII. Furniture, bedding, and upholstery ..	1,242,281	962,645	330,713	285,449	179,213	52,635	3,052,936
XIV. Drugs, chemicals, and by-products	709,614	599,552	20,863	223,960	127,323	14,376	1,695,688
XV. Surgical and other scientific instruments	56,078	44,830	11,871	10,479	5,172	..	128,430
XVI. Jewellery, timepieces, and plated ware	159,246	183,406	20,261	28,918	13,574	3,031	408,431
XVII. Heat, light & power	1,321,524	763,620	616,960	555,993	97,267	79,142	3,434,506
XVIII. Rubber Goods and Leatherware, n.e.i.	701,897	925,147	56,651	26,606	11,619	275	1,722,195
XIX. Other industries, n.e.i.	68,581	45,700	3,572	745	7,639	..	126,237
Total ..	37,092,196	29,889,557	9,298,370	8,390,603	3,922,923	1,981,517	90,575,166

The maximum amount of salaries and wages paid in any particular class during 1926-27 was in Class V., the amount being £23,778,913, or 26.25 per cent. on the total amount; the minimum amount was in Class XIX., £126,237, or 0.14 per cent. on the total. The State in which the largest amount was paid was New South Wales.

(ii) *Totals and Averages, 1922-23 to 1926-27.* The following statement shows the total amount of salaries and wages paid, and the average amount paid per employee in each State, during each of the years 1922-23 to 1926-27. The figures are exclusive of working proprietors and of the amounts drawn from the business by them :—

SALARIES AND WAGES PAID IN FACTORIES.—TOTAL AND AVERAGE PER ANNUM PER EMPLOYEE, 1922-23 TO 1926-27.

Year. (*a*)	Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
		£	£	£	£	£	£	£
1922-23	Total amount paid ..	27,050,730	25,547,192	7,447,959	5,943,745	3,500,625	1,642,901	71,133,152
	Average per employee	184.44	175.79	178.16	178.83	189.32	167.23	179.92
1923-24	Total amount paid ..	29,772,994	27,472,084	7,764,929	6,727,398	3,640,959	1,899,901	77,278,265
	Average per employee	194.08	184.80	179.21	188.17	190.22	163.60	187.61
1924-25	Total amount paid ..	31,520,849	27,444,141	9,228,454	7,150,658	4,127,839	1,888,080	81,360,021
	Average per employee	198.21	186.81	193.96	193.54	196.03	179.34	192.78
1925-26	Total amount paid ..	33,566,546	27,657,753	9,544,115	7,787,912	6,288,036	1,880,321	86,724,683
	Average per employee	201.04	189.82	194.37	201.84	*b*196.92	176.57	195.77
1926-27	Total amount paid ..	37,092,196	29,889,557	9,298,370	8,390,603	3,922,923	1,981,517	90,575,166
	Average per employee	210.55	193.70	198.91	206.37	200.29	178.19	201.91

(*a*) See general note on first page of this Chapter.
(*b*) Average computed on estimated salaries and wages for twelve months ended 30th June, 1926.

In comparing the figures in the preceding table, regard should be paid to the nature of certain industries which are carried on to a greater extent in some States than in others. In Victoria, for instance, there is a large number of hands employed in Class VII., comprising a heavy percentage of women and children. The highest average wage per employee in 1926-27 was paid in New South Wales, where the more highly skilled industries are largely located.

In consequence of the rapid rise in the cost of living, the salaries and wages paid in factories have advanced considerably during recent years. During the past four years the average was increased by £21.99 or 12.22 per cent., while the additional outlay for wage increases amounted in the aggregate to more than £9,750,000.

(iii) *Earnings of Males and Females, 1926-27.* The following table shows the approximate amount paid in salaries and wages to males and females in each class of industry in each State during the year 1926-27 :—

SALARIES AND WAGES.—MALE AND FEMALE FACTORY EMPLOYEES, 1926-27.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
MALES.							
	£	£	£	£	£	£	£
I. Treating raw material product of agricultural and pastoral pursuits, etc. ..	785,781	866,806	114,719	147,080	54,069	44,807	2,013,262
II. Treating oils and fats, animal, vegetable, etc. ..	258,058	179,355	45,939	51,961	48,385	9,296	592,994
III. Processes in stone, clay, glass, etc. ..	2,392,860	1,361,753	201,863	531,009	235,270	91,742	4,814,497
IV. Working in wood ..	2,068,799	1,887,935	1,075,319	454,460	716,785	332,315	6,535,613
V. Metal works, machinery, etc. ..	11,307,431	6,362,006	1,841,263	2,513,417	927,004	507,862	23,458,983

SALARIES AND WAGES.—MALE AND FEMALE FACTORY EMPLOYEES, 1926–27—*continued.*

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
MALES—*continued.*							
	£	£	£	£	£	£	£
VI. Connected with food and drink, etc. ..	3,528,697	3,336,038	2,816,867	883,831	488,851	272,687	11,326,971
VII. Clothing and textile fabrics, etc. ..	2,228,825	3,248,847	382,152	265,469	150,862	134,821	6,410,976
VIII. Books, paper, printing, and engraving	2,482,860	1,978,103	725,922	423,004	277,684	142,890	6,030,463
IX. Musical instruments, etc.	258,347	118,616	..	11,331	..	..	388,294
X. Arms and explosives	105,711	91,518	..	533	..	..	197,762
XI. Vehicles and fittings, saddlery and harness, etc. ..	1,677,789	1,527,184	287,953	1,257,563	233,161	107,097	5,090,747
XII. Ship and boat building and repairing	1,408,325	89,917	21,252	73,631	4,135	4,927	1,602,187
XIII. Furniture, bedding, and upholstery ..	1,143,702	894,073	315,296	272,835	171,414	50,813	2,848,133
XIV. Drugs, chemicals, and by-products	594,352	507,620	14,420	212,879	122,532	13,519	1,465,322
XV. Surgical and other scientific instruments	52,103	42,967	10,443	9,314	4,641	..	119,468
XVI. Jewellery, timepieces, and plated ware	149,106	170,369	19,311	28,372	13,231	3,031	383,420
XVII. Heat, light, & power	1,310,859	712,512	610,350	542,013	96,830	78,289	3,350,853
XVIII. Rubber Goods and Leatherware, n.e.i.	519,911	794,782	43,709	21,238	10,404	275	1,390,319
XIX. Other industries, n.e.i.	46,133	28,844	2,951	693	5,440	..	84,061
Total ..	32,319,649	24,199,245	8,529,729	7,700,683	3,560,698	1,794,371	78,104,325
FEMALES.							
I. Treating raw material product of agricultural and pastoral pursuits, etc. ..	22,853	5,648	920	1,114	568	220	31,323
II. Treating oils and fats, animal, vegetable, etc. ..	40,962	19,543	3,631	4,919	815	757	70,627
III. Processes in stone, clay, glass, etc. ..	26,459	19,015	1,798	2,859	4,324	220	54,675
IV. Working in wood ..	25,142	17,595	11,247	6,363	2,289	3,753	66,389
V. Metal works, machinery, etc. ..	172,827	99,264	16,970	20,604	6,017	4,248	319,930
VI. Connected with food and drink, etc. ..	661,349	586,872	85,400	77,842	43,010	45,617	1,500,090
VII. Clothing and textile fabrics, etc. ..	2,873,803	4,143,280	484,017	421,167	235,424	110,703	8,268,394
VIII. Books, paper, printing, and engraving	416,705	375,611	109,108	67,408	43,168	14,285	1,026,285
IX. Musical instruments, etc.	37,994	2,787	1,671	143	..	..	42,595
X. Arms and explosives	1,111	26,274	..	..	..	..	27,385
XI. Vehicles and fittings, saddlery and harness, etc. ..	42,215	19,935	9,408	42,750	9,295	3,811	127,414
XII. Ship and boat building and repairing	8,072	755	60	..	..	..	8,887
XIII. Furniture, bedding, and upholstery ..	98,579	68,572	15,417	12,614	7,799	1,822	204,803
XIV. Drugs, chemicals, and by-products	115,262	91,932	6,443	11,081	4,791	857	230,366
XV. Surgical and other scientific instruments	3,975	1,863	1,428	1,165	531	..	8,962
XVI. Jewellery, timepieces, and plated ware	10,140	13,037	950	541	343	..	25,011
XVII. Heat, light, & power	10,665	51,108	6,610	13,980	437	853	83,653
XVIII. Rubber Goods and Leatherware, n.e.i.	181,986	130,365	12,942	5,368	1,215	..	331,876
XIX. Other industries, n.e.i.	22,448	16,856	621	52	2,199	..	42,176
Total ..	4,772,547	5,690,312	768,641	689,970	362,225	187,146	12,470,841

(iv) *Total and Average Earnings of Males and Females, 1922–23 to 1926–27.* Similar information for the last five years is given in the table hereunder :—

SALARIES AND WAGES.—MALE AND FEMALE FACTORY EMPLOYEES, 1922–23 TO 1926–27.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
			MALES.				
1922–23.*a* Amount paid .. £	23,456,421	20,799,146	6,781,882	5,392,340	3,217,347	1,499,750	61,146,886
Per cent. on total ..	86.71	81.41	91.06	90.72	91.91	91.29	85.96
Average per employee £	213.83	215.56	199.57	202.85	210.53	187.99	210.84
1923–24.*a* Amount paid .. £	26,166,890	22,581,677	7,058,196	6,115,958	3,345,430	1,739,153	67,007,304
Per cent. on total ..	87.89	82.20	90.90	90.91	91.88	91.54	86.71
Average per employee £	225.71	224.08	200.39	212.48	210.39	183.75	218.93
1924–25.*a* Amount paid .. £	27,670,943	22,515,561	8,508,263	6,504,470	3,817,930	1,726,633	70,743,800
Per cent. on total ..	87.78	82.04	92.20	90.96	92.49	91.45	86.95
Average per employee £	230.29	220.49	214.83	217.70	216.26	201.69	224.41
1925–26.*a* Amount paid .. £	29,370,062	22,544,903	8,797,552	7,139,556	5,796,981	1,708,209	75,357,263
Per cent. on total ..	87.50	81.51	92.18	91.67	92.19	90.85	86.89
Average per employee £	233.97	230.26	213.66	225.25	*b*216.92	199.93	227.55
1926–27. Amount paid .. £	32,319,649	24,199,245	8,529,729	7,700,633	3,560,698	1,794,371	78,104,325
Per cent. on total ..	87.13	80.96	91.73	91.78	90.77	90.56	86.23
Average per employee £	245.40	236.53	217.86	229.71	222.50	201.14	235.53
			FEMALES.				
1922–23.*a* Amount paid . £	3,594,309	4,748,046	666,077	551,405	283,278	143,151	9,986.266
Per cent. on total ..	13.29	18.59	8.94	9.28	8.09	8.71	14.04
Average per employee £	97.23	97.21	85.13	82.87	88.30	75.55	94.80
1923–24.*a* Amount paid .. £	3,606,104	4,890,407	706,733	611,440	295,529	160,748	10,270,961
Per cent. on total ..	12.11	17.80	9.10	9.09	8.12	8.46	13.29
Average per employee £	96.22	102.12	87.20	87.75	91.21	74.83	97.05
1924–25.*a* Amount paid .. £	3,849,906	4,928,580	720,191	646,188	309,909	161,447	10,616,221
Per cent. on total ..	12.22	17.96	7.80	9.04	7.51	8.55	13.05
Average per employee £	100.20	103.74	90.30	91.42	91.07	82.08	99.41
1925–26.*a* Amount paid .. £	4,196,484	5,112,850	746,563	648,356	491,055	172,112	11,367,420
Per cent. on total ..	12.50	18.49	7.82	8.33	7.81	9.15	13.11
Average per employee £	101.30	106.97	94.17	94.13	*b*94.29	81.76	102.21
1926–27. Amount paid .. £	4,772,547	5,690,312	768,641	689,970	362,225	187,146	12,470,841
Per cent. on total ..	12.87	19.04	8.27	8.22	9.23	9.44	13.77
Average per employee £	107.32	109.44	101.22	96.69	101.10	85 11	106.61

(*a*) See general note on first page of this Chapter.
(*b*) Averages computed on estimated salaries and wages for twelve months ended 30th June, 1926.

(v) *Managers, Overseers, and Other Employees.* A further analysis of salaries and wages paid is given in the following table, the amounts paid to managers, overseers, etc., being differentiated from those paid to other employees. As previously mentioned, amounts drawn by working proprietors are excluded in all cases.

SALARIES AND WAGES.—MANAGERS, OVERSEERS, AND OTHER FACTORY EMPLOYEES, AUSTRALIA, 1926–27.

Class of Industry.	Salaries and Wages Paid to—						
	Managers, Overseers, Accountants, and Clerks.		All other Employees.		All Employees.		
	Males.	Females.	Males.	Females.	Males.	Females.	Total.
	£	£	£	£	£	£	£
I. Treating raw material product of agricultural and pastoral pursuits, etc. ..	238,784	12,911	1,774,478	18,412	2,013,262	31,323	2,044,585
II. Treating oils and fats, animal, vegetable, etc.	136,358	22,833	456,636	47,794	592,994	70,627	663,621
III. Processes in stone, clay, glass, etc.	552,596	30,370	4,261,901	24,305	4,814,497	54,675	4,869,172
IV. Working in wood ..	727,715	55,009	5,807,898	11,380	6,535,613	66,389	6,602,002
V. Metal works, machinery, etc. ..	2,407,581	156,779	21,051,402	163,151	23,458,983	319,930	23,778.913
VI. Connected with food and drink, etc.	2,190,330	245,479	9,136,641	1,254,611	11,326 971	1,500,090	12,827,061
VII. Clothing and textile fabrics, etc. ..	1,097,453	440,815	5,313,523	7,827,579	6,410,976	8,268,394	14,679,370
VIII. Books, paper, printing and engraving ..	1,025,224	222,899	5,005,239	803,386	6,030,463	1,026,285	7,056,748
IX. Musical instruments, etc.	46,754	12,230	341,540	30,365	388,294	42,595	430,889
X. Arms and explosives	37,886	3,090	159,876	24,295	197,762	27,385	225,147

SALARIES AND WAGES.—MANAGERS, OVERSEERS, AND OTHER FACTORY EMPLOYEES, AUSTRALIA, 1926–27—*continued.*

Class of Industry.	Salaries and Wages Paid to—						
	Managers, Overseers, Accountants, and Clerks.		All Other Employees.		All Employees.		
	Males.	Females.	Males.	Females.	Males.	Females.	Total.
	£	£	£	£	£	£	£
XI. Vehicles and fittings, saddlery and harness, etc. ..	555,037	81,947	4,535,710	45,467	5,090,747	127,414	5,218,161
XII. Ship and boat building and repairing ..	178,672	7,004	1,423,515	1,883	1,602,187	8.887	1,611,074
XIII. Furniture, bedding, and upholstery ..	259,070	41,961	2,589,063	162,842	2,848,133	204,803	3,052,936
XIV. Drugs, chemicals, and by-products ..	327,400	54,114	1,137,922	176,252	1,465,322	230,366	1,695,688
XV. Surgical and other scientific instruments	18,715	3,634	100,753	5,328	119,468	8,962	128,430
XVI. Jewellery, timepieces, and plated ware ..	32,653	9,434	350,767	15,577	383,420	25,011	408,431
XVII. Heat, light, and power	554,588	27,963	2,796,265	55,690	3,350,853	83,653	3,434.506
XVIII. Rubber Goods and Leatherware, n.e.i.	195,484	28,480	1,194,835	303,396	1,390,319	331,876	1,722,195
XIX. Other industries, n.e.i.	15,709	3,412	68,352	38,764	84,061	42,176	126,237
Total ..	10,598,009	1,460,364	67,506,316	11,010.477	78.104,325	12,470.841	90.575,166
Average paid per employee	359.71	145.73	223.42	102.94	235.53	106.61	201.91

3. Value of Fuel and Light Used.—(i) *Total Amount, 1926–27.* The expenditure in factories on fuel and light is of considerable importance; in 1926–27 it amounted to £13,724,047. The classes of industry in which fuel was most extensively used were Class V., Metal Works, Machinery, etc., £3,913,064; Class XVII., Heat, Light, Power, etc., £3,282,907, of which amount £2,808,565 was expended on generating electric light and power; Class VI., Connected with Food, Drink, etc., £2,219,138; and Class III., Stone, Clay, Glass, etc., £1,858,956. The following table shows the value of fuel and light used in the different classes of industry during 1926–27:—

VALUE OF FUEL AND LIGHT USED IN FACTORIES, 1926–27.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc. ..	154,994	109,513	16,563	22,138	6,029	3,701	312,938
II. Treating oils and fats, animal, vegetable, etc.	56,346	55,442	5,868	10,753	22,773	1,332	152.514
III. Processes in stone, clay, glass, etc. ..	839,798	562,891	81,611	240,045	75,484	59,127	1,858,956
IV. Working in wood ..	95.603	51,530	39.937	17.149	17,542	21.096	242,857
V. Metal works, machinery, etc.	2,594,310	409,132	88,296	479,176	56,070	286,080	3,913,064
VI. Connected with food and drink, etc. ..	772,722	616,644	495,487	186,603	92,643	55,039	2,219,138
VII. Clothing and textile fabrics, etc. ..	181,635	310,550	21,907	21,834	13,194	31,281	580.401
VIII. Books, paper, printing, and engraving ..	146,314	118,730	31,076	16,643	11,376	5,356	329.495
IX. Musical instruments, etc.	13,370	2,269	20	229	..	..	15,888
X. Arms and explosives	6,122	17,872	..	24	..	..	24,018
XI. Vehicles and fittings, saddlery and harness, etc. ..	71,511	57,080	10,685	50,022	8,470	3.720	201,488
XII. Ship and boat building and repairing ..	73,961	5,686	228	4,304	46	81	84,306
XIII. Furniture, bedding and upholstery ..	33,398	32,301	10,294	9,685	4,352	1,810	91,840
XIV. Drugs, chemicals, and by-products ..	81,622	73,614	2,378	35,516	15,049	1,235	209,414
XV. Surgical and other scientific instruments	1,424	1,530	623	420	268	..	4,265
XVI. Jewellery, timepieces, and plated ware ..	5,928	7,598	678	1,858	455	182	16,699
XVII. Heat, light, and power	1,729,990	842,851	181.259	287.017	224,605	17,185	3,282,907
XVIII. Rubber Goods and Leatherware, n.e.i.	58,065	116,270	3,253	1,498	1.051	9	180,146
XIX. Other industries, n.e.i.	1,901	945	455	23	389	..	3,713
Total	6,919,014	2,392,448	990,618	1,384,937	549,796	487,234	13,724,047

(ii) *Total Amount, 1922–23 to 1926–27.* The following table gives the sums expended on fuel and light during the past five years :—

VALUE OF FUEL AND LIGHT USED IN FACTORIES, 1922–23 TO 1926–27.

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
1922–23	4,021,068	2,443,681	690,656	948,455	361,990	193,765	8,659,615
1923–24	5,129,848	2,803,239	708,888	1,008,557	380,499	265,409	10,296,440
1924–25	5,883,494	2,964,635	782,384	1,154,902	392,753	535,082	11,713,250
1925–26	6,256,725	3,156,382	1,134,530	1,332,914	701,008	501,667	13,083,226
1926–27	6,919,014	3,392,448	990,618	1,384,937	549,796	487,234	13,724,047

(a) See general note on first page of this Chapter.

4. Value of Raw Materials Used.—(i) *Total Amount, 1926–27.* The value of raw materials worked up (i.e., exclusive of fuel, lubricants, etc.) in factories in Australia during 1926–27 was £232,643,518, which represents 56.92 per cent. of the total value of the final output. (See next sub-section.) The following table shows the value of the raw materials worked up in various classes of industry in each State :—

VALUE OF RAW MATERIALS USED IN FACTORIES, 1926–27.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc. ..	6,558,491	4,681,952	1,756,674	754,297	402,667	33,192	14,187,273
II. Treating oils and fats, animal, vegetable, etc.	1,688,962	957,342	155,511	235,482	109,739	30,420	3,177,456
III. Processes in stone, clay, glass, etc. ..	2,126,879	1,140,620	173,638	428,329	169,715	44,302	4,083,483
IV. Working in wood ..	4,958,015	2,383,396	1,958,847	1,472,570	938,485	190,661	11,901,974
V. Metal works, machinery, etc. ..	26,552,229	7,934,913	1,600,085	6,148,243	782,564	1,421,079	44,439,113
VI. Connected with food and drink, etc. ..	36,376,335	26,299,510	16,290,004	7,147,460	3,342,302	1,465,238	90,920,849
VII. Clothing and textile fabrics, etc. ..	9,022,671	14,831,336	1,480,862	1,235,320	752,304	469,973	27,792,466
VIII. Books, paper, printing, and engraving	3,596,066	2,880,117	579,434	550,808	269,082	90,712	7,966,219
IX. Musical instruments, etc.	540,350	151,491	1,649	20,808	..	..	714,298
X. Arms and explosives	17,429	236,221	..	911	..	..	254,561
XI. Vehicles and fittings, saddlery and harness, etc. ..	1,340,127	1,182,394	281,067	2,138,949	211,591	63,823	5,217,951
XII. Ship and boat building and repairing..	700,229	39,452	17,052	70,701	4,313	3,142	834,889
XIII. Furniture, bedding, upholstery ..	2,212,320	1,537,409	394,346	416,799	237,420	44,308	4,842,597
XIV. Drugs, chemicals, and by-products ..	2,651,096	1,992,476	56,316	819,310	720,341	114,510	6,354,049
XV. Surgical and other scientific instruments	48,182	39,642	10,846	9,765	6,263	..	114,698
XVI. Jewellery, timepieces, and plated ware ..	146,324	228,547	9,689	26,098	14,084	613	425,355
XVII. Heat, light, and power	2,171,654	1,842,428	202,161	311,862	68,854	51,537	4,648,496
XVIII. Rubber Goods and leatherware, n.e.i.	1,629,280	2,644,903	93,274	59,964	15,771	394	4,443,586
XIX. Other Industries, n.e.i.	197,749	97,898	6,034	450	22,074	..	324,205
Total ..	102,534,388	71,102,047	25,067,489	21,848,126	8,067,569	4,023,899	232,643,518

The largest value of raw materials used was in Class VI., "Connected with Food and Drink, etc." the total being £90,920,849. The next in order of importance was Class V., "Metal Works, Machinery, etc.," in which raw materials valued at £44,439,113 were used. The minimum value appears in Class XV., "Surgical and other Scientific Instruments," the total being only £114,698.

(ii) *Total Amount, 1922–23 to 1926–27.* The following table presents particulars of the values of raw materials used in factories during the past five years :—

VALUE OF RAW MATERIALS USED IN FACTORIES, 1922–23 TO 1926–27.

Year.(*a*)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	£	£	£	£	£	£	£
1922–23 ..	77,222,401	62,658,163	21,403,740	16,015,552	5,553,347	3,229,460	186,082,663
1923–24 ..	85,568,596	62,217,874	22,110,052	17,463,156	5,897,549	3,781,499	197,038,726
1924–25 ..	94,681,328	66,290,693	30,726,434	19,409,892	6,993,731	3,891,900	221,993,978
1925–26 ..	98,868,051	68,788,141	27,885,361	21,430,234	11,137,678	3,725,443	231,834,908
1926–27 ..	102,534,388	71,102,047	25,067,489	21,848,126	8,067,569	4,023,899	232,643,518

(*a*) See general note on first page of this Chapter.

5. Total Value of Output. (i) *Total, 1926–27.* The value of the output of new gooks manufactured and of repairs effected in factories of various classes in each State during 1926–27 is shown in the following table. The figures given represent not only the increase in value due to the process of manufacture, but also include the value of the raw materials and the fuel and light used. The difference between the sum of the values of the materials and the fuel and light used and the total output (see sub-section 6 hereof) is the real value of production from manufactories.

TOTAL VALUE OF OUTPUT OF FACTORIES, 1926–27.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	8,286,486	6,435,536	1,722,829	1,010,662	544,099	105,118	18,104,730
II. Treating oils and fats, animal, vegetable, etc.	2,666,794	1,540,844	290,143	378,175	226,095	49,242	5,151,293
III. Processes in stone, clay, glass, etc.	7,402,486	4,084,161	695,848	1,589,680	647,146	238,482	14,657,803
IV. Working in wood ..	8,394,749	5,395,400	3,609,787	2,227,427	2,141,483	686,954	22,455,800
V. Metal works, machinery, etc.	47,039,441	17,703,405	3,923,545	9,961,065	2,220,747	2,772,090	83,620,293
VI. Connected with food and drink, etc.	49,456,706	36,071,851	22,804,591	9,750,316	4,678,077	2,129,198	124,890,739
VII. Clothing and textile fabrics, etc.	17,859,283	27,591,787	2,750,887	2,341,605	1,381,051	916,385	52,840,998
VIII. Books, paper, printing, and engraving ..	8,761,601	6,943,920	1,951,395	1,348,584	899,104	312,951	20,217,555
IX. Musical instruments, etc.	1,112,830	337,548	4,087	37,834	..	..	1,492,299
X. Arms and explosives ..	161,314	440,722	..	1,751	..	..	603,787
XI. Vehicles and fittings, saddlery and harness, etc.	3,948,309	3,579,931	768,505	3,955,142	581,427	235,206	13,068,520
XII. Ship and boat building and repairing ..	2,257,066	167,572	44,159	172,744	10,837	12,307	2,664,685
XIII. Furniture, bedding, and upholstery	4,308,299	3,200,093	903,206	872,824	500,363	128,371	9,913,156
XIV. Drugs, chemicals, and by-products	5,303,184	3,432,993	107,534	1,310,395	1,073,962	150,508	11,378,576
XV. Surgical and other scientific instruments	141,968	119,518	35,269	42,864	13,582	..	353,201
XVI. Jewellery, timepieces, and plated ware	419,054	547,052	45,707	75,327	34,335	6,085	1,127,560
XVII. Heat, light, and power ..	8,665,359	5,066,231	1,476,058	1,698,941	643,507	360,748	17,910,844
XVIII. Rubber Goods and Leatherware, n.e.i. ..	2,764,010	4,560,628	174,877	110,845	39,518	900	7,650,778
XIX. Other Industries, n.e.i. ..	353,507	178,759	19,340	2,288	36,327	..	590,221
Total	179,302,446	127,397,951	41,327,767	36,888,469	15,671,660	8,104,545	408,692,838

New South Wales far exceeds the other States in respect of the total value of output, the value being £179,302,446, or 43.87 per cent. on the total for all States. Next in order of value is Victoria, which produced 31.17 per cent.; the value of the output of Queensland was 10.11 per cent.; of South Australia 9.03 per cent.; of Western Australia 3.84 per cent.; and of Tasmania 1.98 per cent. The two most important classes in order of value of output (Classes VI. and V.) are the same as in order of value of raw materials used.

(ii) *Totals and Averages, 1922–23 to 1926–27.* The following statement shows the value of output of factories, value per employee, and value per head of population in each State during the five years ended 1926–27:—

TOTAL VALUE OF OUTPUT OF FACTORIES, 1922–23 TO 1926–27.

Year.(a)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
				TOTAL.			
	£	£	£	£	£	£	£
1922–23 ..	132,735,140	111,286,343	37,824,101	26,903,775	11,321,551	6,426,226	326,497,136
1923–24 ..	146,359,260	113,921.927	38,867,603	29,650,995	11,976,310	7,801,488	348,577,583
1924–25 ..	159,608,873	118,177,398	49,142,436	32,143,993	13,928,782	7,842,504	380,843,986
1925–26 ..	169,963,146	119,986,439	45,900,668	35,437,147	21,449,799	7,605,194	400,342,393
1926–27 ..	179,302,446	127,397,951	41,327,767	36,888,469	15,671,660	8,104,545	408,692,838
				PER EMPLOYEE.			
	£	£	£	£	£	£	£
1922–23 ..	872	729	871	775	593	622	792
1923–24 ..	917	730	865	795	608	638	811
1924–25 ..	963	767	1,005	838	640	713	866
1925–26 ..	976	784	909	885	b 646	680	872
1926–27 ..	979	788	859	875	767	693	875
				PER HEAD OF POPULATION.			
	£	£	£	£	£	£	£
1922–23 ..	61.09	69.98	48.43	52.42	33.33	29.92	58.11
1923–24 ..	66.24	70.09	48.42	56.51	34.39	35.61	60.76
1924–25 ..	70.80	71.32	58.86	59.69	38.25	36.00	64.84
1925–26 ..	73.94	71.25	53.30	64.24	b 38.42	35.04	65.62
1926–27 ..	76.37	74.42	46.85	65.13	41.38	37.74	66.88

(a) See general note on first page of this Chapter.
(b) Averages computed on the estimated output for the twelve months ended 30th June, 1926.

6. Value added in Process of Manufacture.—(i) *Total in Classes, 1926–27.* The difference between the figures given in sub-section 5 and the sum of the corresponding figures in sub-sections 3 and 4 represents the amount added to the value of the raw materials by the process of manufacture. This is the real measure of the value of production of manufacturing industries. The following table shows the value added in this manner during 1926–27 in each State for the various classes of factories:—

VALUE ADDED IN PROCESS OF MANUFACTURE, 1926–27.

Class of Industry.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc. ..	1,573,001	1,644,071	−50,408	234,227	135,403	68,225	3,604.519
II. Treating oils and fats, animal, vegetable, etc.	921,486	528,060	128,764	131,940	93,583	17,490	1,821,323
III. Processes in stone, clay, glass, etc. ..	4,435,809	2,380,650	440,599	921,306	401,947	135,053	8,715,364
IV. Working in wood ..	3,341,131	2,960,474	1,611,003	737,708	1,185,456	475,197	10,310,969
V. Metal works, machinery, etc.	17,892,902	9,359,360	2,235,164	3,333,646	1,382,113	1,064,931	35,268,116
VI. Connected with food and drink, etc. ..	12,307,649	9,155,697	6,019,100	2,416,253	1,243,132	608,921	31,750,752
VII. Clothing and textile fabrics, etc. ..	8,654,977	12,449,901	1,248,118	1,084,451	615,553	415,131	24.468,131
VIII. Books, paper, printing and engraving ..	5,019,221	3,945,073	1,340,885	781,133	618,646	216,883	11,921,841
IX. Musical instruments, etc.	559,110	183,788	2,418	16,797	..	..	762,113
X. Arms and explosives	137,763	186,629	..	816	..	..	325,208
XI. Vehicles and fittings, saddlery and harness etc.	2,536,671	2,340,457	476,753	1,766,171	361,366	167,663	7,649,081
XII. Ship and boat building and repairing ..	1,482,876	122,434	26,879	97,739	6,478	9,084	1,745.490
XIII. Furniture, bedding, and upholstery ..	2,062,581	1,630,383	498,566	446,340	258,591	82.258	4,978,719
XIV. Drugs, chemicals, and by-products ..	2,570,466	1,366,903	48,840	455,569	338,572	34,763	4,815,113
XV. Surgical & other scientific instruments ..	92,362	78,346	23,800	32,679	7,051	..	234,238
XVI. Jewellery, timepieces, and plated ware ..	266,802	310,907	35,340	47.371	19,796	5.290	685.506
XVII. Heat, light and power	4,763,715	2,380,952	1,092,638	1,100,062	350,048	292,026	9.979,441
XVIII. Rubber goods and Leather ware, n.e.i.	1,076,665	1,799,455	78,350	49,383	22,696	497	3.027.046
XIX. Other Industries, n.e.i.	153,857	79,916	12,851	1,815	13,864	..	262.303
Total ..	69,849,044	52,903,456	15,269,660	13,655.406	7.054,295	3.593.412	162,325,273

(ii) *Totals and Averages, 1922–23 to 1926–27.* The amount of the value added is in much the same order as in the case of value of output, the six most important classes being V., VI., VII., VIII., IV. and XVII., in the order named. The value added to raw materials by process of manufacture and the amount per employee and per head of population are shown in the following table for the years 1922–23 to 1926–27:—

FACTORIES.—VALUE ADDED IN PROCESS OF MANUFACTURE, 1922–23 TO 1926–27.

Year.(*a*)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
VALUE.							
	£	£	£	£	£	£	£
1922–23 ..	51,491,671	46,184,499	15,729,705	9,939,768	5,406,214	3,003,001	131,754,858
1923–24 ..	55,660,816	48,900,814	16,048,663	11,179,282	5,698,262	3,754,580	141,242,417
1924–25 ..	59,044,051	48,922,070	17,633,618	11,579,199	6,542,298	3,415,522	147,136,758
1925–26 ..	64,838,370	48,041,916	16,880,777	12,673,999	9,611,113	3,378,084	155.424,259
1926–27 ..	69,849,044	52,903,456	15,269,660	13,655,406	7,054,295	3,593,412	162,325,273

(*a*) See general note on first page of this chapter.

FACTORIES—VALUE ADDED IN PROCESS OF MANUFACTURE, 1922–23 TO 1926–27—*continued.*

Year.(*a*)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
PER EMPLOYEE.							
	£	£	£	£	£	£	£
1922–23 ..	338	303	362	286	283	291	319
1923–24 ..	349	313	357	300	289	307	328
1924–25 ..	356	317	360	302	301	311	334
1925–26 ..	372	314	334	316	*b* 289	302	338
1926–27 ..	381	327	317	324	346	307	347
PER HEAD OF POPULATION.							
	£	£	£	£	£	£	£
1922–23 ..	23.70	29.00	20.14	19.37	15.92	13.98	23.45
1923–24 ..	25.19	30.09	19.99	21.30	16.36	17.14	24.62
1924–25 ..	26.19	29.52	21.12	21.50	17.97	15.68	25.05
1925–26 ..	28.21	28.53	21.99	22.98	*b* 17.22	15.56	25.40
1926–27 ..	29.75	30.90	17.31	24.11	18.63	16.73	26.56

(*a*) See general note on first page of this Chapter. (*b*) Averages computed on the estimated added value for the twelve months ended 30th June, 1926.

7. **Value of Output and Cost of Production.**—As the total value of the output for Australia for 1926–27 was estimated at £408,692,838, there remained, after payment of £232,643,518, the value of the raw materials used, of £90,575,166 for salaries and wages and of £13,724,047 for fuel, the sum of £71,750,107 to provide for all other expenditure and profits. The following table gives corresponding particulars for each State, expressed absolutely, and as percentages on the total value of the output for the year 1926–27 :—

FACTORIES.—VALUE OF OUTPUT AND COST OF PRODUCTION, 1926–27.

State.	Raw Materials Used. (*a*)	Fuel and Light.	Salaries and Wages.	All other Expenditure, Interest, and Profits.	Total Value of Output.
VALUE AND COST, ETC.					
	£	£	£	£	£
New South Wales ..	102,534,388	6,919,014	37,092,196	32,756,848	179,302,446
Victoria	71,102,047	3,392,448	29,889,557	23,013,899	127,397,951
Queensland	25,067,489	990,618	9,298,370	5,971,290	41,327,767
South Australia ..	21,848,126	1,384,937	8,390,603	5,264,803	36,888,469
Western Australia ..	8,067,569	549,796	3,922,923	3,131,372	15,671,660
Tasmania	4,023,899	487,234	1,981,517	1,611,895	8,104,545
Australia ..	232,643,518	13,724,047	90,575,166	71,750,107	408,692,838
PERCENTAGE OF COSTS, ETC., ON TOTAL VALUE.					
	%	%	%	%	%
New South Wales ..	57.18	3.86	20.69	18.27	100.00
Victoria	55.82	2.66	23.46	18.06	100.00
Queensland	60.65	2.40	22.50	14.45	100.00
South Australia ..	59.23	3.75	22.75	14.27	100.00
Western Australia ..	51.48	3.51	25.03	19.98	100.00
Tasmania	49.65	6.01	24.45	19.89	100.00
Australia ..	56.92	3.36	22.16	17.56	100.00

(*a*) Including the values of containers, packing, etc., also the cost of tools replaced and repairs to plant.

§ 8. Value of Land, Buildings, Plant, and Machinery.

1. **General.**—As an indication of the permanent character and stability of the industries which have been established in Australia, it may be noted that the values of land and buildings and of plant and machinery used in the factories are rapidly increasing. Thus, for the whole of Australia the total value of land and buildings and plant and machinery has increased from 1922–23 to 1926–27 by £59,629,145, i.e., from £160,463,218 to £220,092,363, or at the rate of £14,907,286 per annum.

The following statement shows the values of land and buildings and of plant and machinery used in connexion with manufacturing industries in each State during the year 1926–27 :—

VALUE OF LAND, BUILDINGS, PLANT AND MACHINERY, 1926–27.

Value of—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	£	£	£	£	£	£	£
Land and buildings	46,950,706	32,269,655	8,645,580	8,207,999	4,822,145	2,449,093	103,345,178
Plant and machinery	48,659,375	31,580,350	16,043,679	8,741,929	5,310,140	6,411,712	116,747,185
Total ..	95,610,081	63,850,005	24,689,259	16,949,928	10,132,285	8,860,805	220,092,363

The total capital invested in land, buildings, plant and machinery in manufacturing industries in Australia during the year 1926–27 was approximately £220,092,363 (or £36 0s. 4d. per head of population); of that sum, £103,345,178 was invested in land and buildings occupied as manufactories, the remaining £116,747,185 being the value of the plant and machinery used in connexion therewith.

2. **Value of Land and Buildings.**—(i) *Total Australia, 1922–23 to 1926–27.* The value of the land and buildings occupied in connexion with manufacturing industries may be conveniently classified according to the nature of the industry concerned.

The following table shows for Australia as a whole the approximate value of land and buildings occupied in connexion with manufacturing industries of various classes during each year from 1922–23 to 1926–27 inclusive :—

VALUE OF LAND AND BUILDINGS.—AUSTRALIA, 1922–23 TO 1926–27.

Class of Industry.	1922–23.(a)	1923–24.(a)	1924–25.(a)	1925–26.(a)	1926–27.
	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	1,983,100	2,085,336	2,249,180	2,273,275	2,257,921
II. Treating oils and fats, animal, vegetable, etc.	831,004	952,566	1,024,779	1,022,445	982,573
III. Processes in stone, clay, glass, etc.	3,242,782	3,592,378	4,247,108	4,368,411	4,687,979
IV. Working in wood	3,889,858	4,101,394	4,322,832	4,620,929	4,325,257
V. Metal works, machinery, etc. ..	11,396,988	12,999,237	14,389,282	15,382,362	16,649,605
VI. Connected with food and drink, etc.	17,064,884	18,277,106	19,568,157	20,802,518	21,892,282
VII. Clothing and textile fabrics, etc. ..	11,588,846	13,247,960	14,841,895	15,289,607	16,464,556
VIII. Books, paper, printing, and engraving	6,132,123	6,747,855	7,376,113	8,022,096	8,544,071
IX. Musical instruments, etc. ..	304,432	254,266	325,792	356,935	427,333
X. Arms and explosives	207,500	298,217	417,831	573,136	597,519
XI. Vehicles and fittings, saddlery and harness, etc.	4,145,937	5,166,587	6,175,406	7,130,967	8,546,494
XII. Ship and boat building and repairing	1,796,690	1,789,464	1,822,238	1,852,896	1,717,756
XIII. Furniture, bedding, and upholstery	2,109,655	2,498,679	2,693,412	2,947,986	3,155,723
XIV. Drugs, chemicals, and by-products	2,171,915	2,351,728	2,453,897	2,565,553	2,815,161
XV. Surgical and other scientific instruments	189,777	221,256	274,283	259,766	296,435
XVI. Jewellery, timepieces, and plated ware	580,094	620,686	629,775	679,828	666,618
XVII. Heat, light, and power	5,277,183	6,102,870	7,170,768	7,107,993	7,600,312
XVIII. Leatherware, n.e.i.	359,636	394,402	401,588	409,110	[b]1,516,040
XIX. Other industries, n.e.i.	1,108,904	860,074	857,571	869,819	201,543
Total	74,381,308	82,562,061	91,241,907	96,535,632	103,345,178

(a) See general note on first page of this Chapter.
(b) Includes Rubber Goods formerly in Class XIX. Other Industries n.e.i.

As shown in the above table, the total net increase during the four years was £28,963,870, or an annual average of £7,240,968. The largest increases were in Classes V., VII., VI., XI., VIII. and XVII., and amounted to £5,252,617 ; £4,875,710 ; £4,827,398 ; £4,400,557 ; £2,411,948 and £2,323,129 respectively.

(ii) *Value in each State, 1926–27.* The following table gives similar information for each State for the past year :—

VALUE OF LAND AND BUILDINGS.—STATES, 1926–27.

Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	1,004,568	916,155	103,755	140,511	77,949	14,983	2,257,921
II. Treating oils and fats, animal, vegetable, etc.	560,853	243,765	76,279	68,954	24,877	7,845	982,573
III. Processes in stone, clay, glass, etc.	2,446,070	1,198,425	181,712	356,548	238,454	266,770	4,687,979
IV. Working in wood ..	1,923,494	1,145,815	482,356	263,615	384,427	125,550	4,325,257
V. Metal works, machinery, etc.	8,732,743	4,355,310	840,735	1,441,351	834,433	445,033	16,649,605
VI. Connected with food and drink, etc.	8,145,449	5,851,870	4,016,538	2,002,739	1,237,567	638,119	21,892,282
VII. Clothing and textile fabrics, etc. ..	7,091,027	6,934,000	689,755	891,808	463,232	394,734	16,464,556
VIII. Books, paper, printing, and engraving ..	4,011,587	2,646,470	798,786	604,326	388,172	94,730	8,544,071
IX. Musical instruments, etc.	240,348	171,670	850	14,465	..	..	427,333
X. Arms and explosives ..	155,179	437,340	..	5,000	..	..	597,519
XI. Vehicles and fittings, saddlery and harness, etc.	3,692,410	2,413,930	568,589	1,190,591	466,545	214,429	8,546,494
XII. Ship and boat building and repairing ..	1,493,382	172,870	9,027	34,487	3,935	4,055	1,717,756
XIII. Furniture, bedding, and upholstery	1,330,573	1,117,775	251,095	241,954	164,043	50,283	3,155,723
XIV. Drugs, chemicals, and by-products ..	1,462,482	741,750	43,730	293,784	204,820	68,595	2,815,161
XV. Surgical and other scientific instruments ..	152,145	79,050	23,696	23,964	17,580	..	296,435
XVI. Jewellery, timepieces, and plated ware ..	290,711	257,615	28,955	51,502	28,415	9,420	666.618
XVII. Heat, light, and power	3,495,559	2,746,220	470,700	520,030	254,256	113,547	7,600,312
XVIII. Rubber Goods and leatherware, n.e.i. ..	602,572	777,960	48,493	59,845	26,170	1,000	1,516,040
XIX. Other industries, n.e.i. ..	119,554	61,665	10,529	2,525	7,270	..	201,543
Total ..	46,950,706	32,269,655	8,645.580	8,207,999	4,822.145	2,449,093	103,345,178

The maximum value for Australia of land and buildings in any particular class was in Class VI., amounting to £21,892,282, or 21.18 per cent. on the total value. The next in order of importance were Classes V., VII., XI., VIII., and XVII. in which the values were £16,649,605 ; £16,464,556 ; £8,546,494 ; £8,544,071 and £7,600,312 respectively. The sum of the values for the six classes mentioned amounted to £79,697,320, or 77.12 per cent. on the total value for all classes.

(iii) *Value in each State, 1922–23 to 1926–27.* The total value of factory land and buildings at the end of each year from 1922–23 to 1926–27 is given hereunder.

VALUE OF LAND AND BUILDINGS, 1922–23 TO 1926–27.

Year.(*a*)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	£	£	£	£	£	£	£
1922–23 ..	34,559,510	22,428,525	6,615,350	5,324,484	4,001,366	1,452,073	74,381,308
1923–24 ..	37,979,192	24,972,560	7,284,212	6,312,553	4,206,874	1,806,670	82,562,061
1924–25 ..	41,351,080	28,468,160	7,873,660	6,882,119	4,562,184	2,104,704	91,241,907
1925–26 ..	43,954,312	29,847,370	8,155,604	7,520,625	4,855,161	2,202,560	96,535,632
1926–27 ..	46,950,706	32,269,655	8,645,580	8,207,999	4,822,145	2,449,093	103,345,178

(*a*) See general note on first page of this Chapter.

Since 1922–23 there has been a marked increase throughout Australia, the States showing the greatest progress being New South Wales, Victoria, and South Australia, with average annual increases of £3,097,799, £2,460,283, and £720,879 respectively.

3. Value of Plant and Machinery.—(i) *Total, Australia, 1922–23 to 1926–27.* The following table shows for Australia as a whole the approximate value of plant and machinery used in factories during each year from 1922–23 to 1926–27 inclusive :—

VALUE OF PLANT AND MACHINERY.—AUSTRALIA, 1922–23 TO 1926–27.

Class of Industry.	1922–23.(*a*)	1923–24.(*a*)	1924–25.(*a*)	1925–26.(*a*)	1926–27.(*a*)
	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc.	2,064,189	2,170,405	2,065,838	2,130,333	2,043,422
II. Treating oils and fats, animal, vegetable, etc.	1,035,461	1,147,029	1,166,482	1,322,592	1,207,096
III. Processes in stone, clay, glass, etc.	4,841,188	5,462,976	5,781,144	5,928,978	6,509,183
IV. Working in wood	4,734,078	5,291,155	5,405,755	5,562,722	5,171,047
V. Metal works, machinery, etc.	16,701,195	18,410,074	19,723,951	21,015,046	21,836,505
VI. Connected with food and drink, etc.	20,214,770	20,948,905	22,845,337	25,368,336	26,283,623
VII. Clothing and textile fabrics, etc.	5,775,392	6,722,006	7,164,675	7,251,468	8,235,014
VIII. Books, paper, printing, and engraving	5,800,029	6,706,697	7,282,913	7,736,172	8,114,407
IX. Musical instruments, etc. ..	86,660	94,453	111,238	140,000	195,203
X. Arms and explosives ..	216,667	252,658	309,017	328,458	337,291
XI. Vehicles and fittings, saddlery and harness, etc. ..	1,047,440	1,277,937	1,524,491	1,896,950	2,157,518
XII. Ship and boat building and repairing	2,035,576	2,045,117	1,888,127	1,949,848	2,093,447
XIII. Furniture, bedding, and upholstery	559,354	673,810	743,217	891,450	957,976
XIV. Drugs, chemicals, and by-products	1,785,912	2,094,340	2,289,112	2,460,230	2,800,020
XV. Surgical and other scientific instruments	39,577	45,919	55,094	58,143	60,411
XVI. Jewellery, timepieces, and plated ware	137,512	146,907	144,983	159,058	139,185
XVII. Heat, light, and power ..	17,887,928	25,030,504	29,538,177	26,752,765	27,175,926
XVIII. Leatherware, n.e.i.	91,306	106,574	99,684	93,340	(*b*) 1,357,774
XIX. Other industries, n.e.i. ..	1,027,676	925,073	1,103,665	1,232,261	72,137
Total	86,081,910	99,552,539	109,242,900	112,278,150	116,747,185

(*a*) See general note on first page of this Chapter.
(*b*) Includes Rubber Goods formerly in Class XIX., Other Industries n.e.i.

During the past four years there has been a steady and substantial net increase amounting in all to £30,665,275, or an annual average of £7,666,319. All classes of industry but one participated, the largest increase being in Class XVII., "Heat, Light, and Power," where it amounted to £9,287,998, while the next in order were Class VI., "Connected with Food and Drink, etc.," £6,068,853, and Class V., "Metal Works, Machinery, etc.," £5,135,310.

(ii) *Value in each State, 1922–23 to 1926–27.* The figures in the previous table refer to Australia as a whole. In the following table results are shown for each State, and it will be seen that the increase is general throughout the States. New South Wales shows the largest advance, viz., £11,110,609 ; while Victoria comes next with £7,585,635.

VALUE OF PLANT AND MACHINERY.—STATES, 1922–23 TO 1926–27.

Year.(*a*)	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
	£	£	£	£	£	£	£
1922–23 ..	37,548,766	23,994,715	11,098,375	5,519,035	4,218,550	3,702,469	86,081,910
1923–24 ..	41,141,890	28,223,915	12,321,440	6,929,821	4,496,082	6,439,391	99,552,539
1924–25 ..	43,553,900	32,563,815	14,002,476	7,529,854	4,864,253	6,728,602	109,242,900
1925–26 ..	45,994,534	30,549,130	15,226,566	8,322,025	5,480,905	6,704,990	112,278,150
1926–27 ..	48,659,375	31,580,350	16,043,679	8,741,929	5,310,140	6,411,712	116,747,185

(*a*) See general note on first page of this Chapter.

(iii) *Value according to Industry, 1926–27.* The following table shows the value of plant and machinery used in factories in each State during 1926–27, classified according to the nature of the industry in which used :—

VALUE OF PLANT AND MACHINERY.—INDUSTRIES, 1926-27.

Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
	£	£	£	£	£	£	£
I. Treating raw material, product of agricultural and pastoral pursuits, etc. ..	922,488	726,975	155,049	101,430	65,092	72,388	2,043,422
II. Treating oils and fats, animal, vegetable, etc.	610,228	309,425	80,715	136,558	67,047	3,123	1,207,096
III. Processes in stone, clay, glass, etc.	3,607,130	1,378,705	308,020	542,090	279,802	393,436	6,509,183
IV. Working in wood ..	1,590,652	1,243,565	818,608	200,257	1,065,812	252.153	5,171,047
V. Metal works, machinery, etc.	12,933,103	3,805,720	1,102,775	1,822,353	685,872	1,486,682	21,836,505
VI. Connected with food and drink, etc... ..	8,216,397	5,864,050	8,953,169	1,673,236	1,190,070	386,701	26,283,623
VII. Clothing and textile fabrics, etc. ..	2,736,524	4,445,195	248,047	261,957	191,563	351,728	8,235,014
VIII. Books, paper, printing, and engraving ..	3,893,767	2,774,245	593,636	398,610	332,925	121,224	8,114,407
IX. Musical instruments, etc.	148,685	42,115	116	4,287	..	..	195,203
X. Arms and explosives ..	55,931	280,970	..	390	..	..	337,291
XI. Vehicles and fittings, saddlery and harness, etc.	707,394	666,695	110,529	553,289	83,452	36,159	2,157,518
XII. Ship and boat building and repairing ..	1,872,209	103,635	27,558	86,930	1,410	1,705	2,093,447
XIII. Furniture, bedding and upholstery ..	410,007	286,925	85,850	103,041	49,857	22,296	957,976
XIV. Drugs, chemicals, and by-products ..	873,564	844,935	39,418	559,544	430,939	51,620	2,800,020
XV. Surgical and other scientific instruments	25,975	21,695	5,346	3,933	3,462	..	60,411
XVI. Jewellery, timepieces, and plated ware ..	53,521	63,245	5,444	11,363	3,494	2,118	139,185
XVII. Heat, light and power	9,490,277	7,856,720	3,483,618	2,272.389	842,594	3,230,328	27,175,926
XVIII. Rubber Goods and Leatherware, n.e.i. ..	475,030	839,460	22,762	9,683	10,788	51	1,357,774
XIX. Other Industries, n.e.i.	36,493	26,075	3,019	589	5,961	..	72,137
Total ..	48,659,375	31,580,350	16,043,679	8,741,929	5,310,140	6,411,712	116,747,185

The greatest value for any particular class of industry is for class XVII., " Heat, Light, and Power," and amounts to £27,175,926, or 23.28 per cent. on the total for all classes. The next in order of importance is Class VI., " Connected with Food and Drink, etc.," amounting to £26,283,623, or 22.51 per cent. on the total, followed by Class V., " Metal Works, Machinery, etc.," which amounts to £21,836,505 or 18.70 per cent. on the total value. The total for these three classes amounts to £75,296,054, or 64.49 per cent. on the total value for all classes.

§ 9. Individual Industries.

1. **General.**—The preceding remarks and tables furnish a general view of the recent development of particular classes of industries in Australia treated under the nineteen categories adopted by the Conference of Statisticians in 1906. In order to make the information complete, it is necessary to furnish details of the development of individual industries. While it is not possible, within the limits of this work, to give a full and detailed account of all the manufacturing industries of Australia, it is proposed to deal herein with such particular industries as are of special importance by reason of the number of persons employed, the number of factories, the amount of capital invested therein, the value of the production, or other features of special interest. In cases where there are only one or two establishments of a particular class in any State, returns relative to output are not published, in order to avoid disclosing information as to the operations of individual factories.

2. **Tanneries.**—(i) *Details for each State, 1926–27.* In Class I. the most important industry is tanning. Formerly the production of tanneries in Australia was confined to the coarser class of leathers, but there are now very few kinds which cannot be produced locally, and by reason of their superiority an export trade has been built up in some varieties.

TANNERIES, 1926–27.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W.A.	Tas.	Australia.
Number of factories	74	44	16	11	6	1	152
Number of employees	1,256	2,304	305	183	110	48	4,206
Actual horse-power of engines employed	2,783	4,203	585	402	309	110	8,392
Approx. value of land and buildings £	329,141	479,505	31,948	33,894	34,759	8,750	917,997
Approx. value of plant and machinery £	213,914	426,250	31,942	25,144	26,165	7,442	730,857
Total amount of wages paid during year £	285,755	529,430	58,127	38,730	24,644	8,912	945,598
Value of fuel used .. .. £	26,396	41,896	5,496	4,596	2,280	810	81,274
Value of raw material worked up £	1,385,602	1,832,058	247,561	108,863	103,635	23,613	3,701,332
Total value of output .. £	1,964,836	2,760,910	360,545	165,483	154,410	37,150	5,443,334
Value added in process of manufacture £	552,838	886,956	107,488	52,224	48,495	12,727	1,660,728

(ii) *Development in Australia, 1922–23 to 1926–27.* The development of the tanning industry during the period 1922–23 to 1926–27 is shown in the following table :—

TANNERIES.—AUSTRALIA, 1922–23 TO 1926–27.

Items.		1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
Number of factories	..	163	166	155	156	152
Number of employees	..	4,542	4,485	4,189	4,347	4,206
Actual horse-power of engines used	..	7,740	8,182	8,149	8,672	8,392
Approx. value of land and buildings	£	769,328	818,212	879,185	902,089	917,997
Approx. value of plant and machinery	£	627,560	684,329	694,608	729,546	730,857
Total amount of wages paid ..	£	963,526	964,563	906,492	959,653	945,598
Value of fuel used	£	75,064	80,117	80,858	84,041	81,274
Value of raw material worked up	£	3,765,981	3,630,198	3,507,778	3,908,737	3,701,332
Value of final output	£	5,568,358	5,475,956	5,171,005	5,564,646	5,443,334
Value added in process of manufacture	£	1,727,313	1,765,641	1,582,369	1,571,868	1,660,728

Decreases were recorded in both the number of factories and employees in the tanning industry during the past four years. The output, however, remained fairly constant, the production of leather during each of the years 1922–23 to 1926–27 being as follows :—1922–23, 55,913,930 lb. ; 1923–24, 51,957,999 lb. ; 1924–25, 48,911,506 lb. ; 1925–26, 55,078,267 lb. ; and 1926–27, 53,885,830 lb.

(iii) *Raw Material Used and Production, 1926–27.* The quantities of raw material used and leather produced in tanneries in each State are shown in the following table :—

TANNERIES.—RAW MATERIAL USED AND PRODUCTION, 1926–27.

Particulars.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Hides and calf skins	No.	1,006,773	1,330,770	176,383	57,691	55,583	18,914	2,646,114
Sheep pelts ..	,,	2,725,904	1,143,543	92,708	74,390	..	..	4,036,545
Other skins ..	,,	372,927	343,915	195,310	6,568	3,980	..	922,700
Bark	tons	10,255	12,446	1,873	1,078	799	305	26,756
Leather made ..	lb.	21,099,047	25,501,205	3,495,976	1,282,030	2,074,031	433,541	53,885,830
Basils produced ..	,,	2,316,398	1,160,497	84,380	74,360	..	..	3,635,635

3. Fellmongering and Wool-scouring Works.—(i) *Details for each State, 1926–27.* The next industry in importance in Class I. is that of fellmongering and wool-scouring, one of the earliest industries established in Australia. The following table gives particulars of the industry in each State during the past year :—

FELLMONGERING AND WOOL-SCOURING WORKS, 1926–27.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W.A.	Tas.	Australia.
Number of factories	35	32	16	4	6	..	93
Number of employees	1,066	571	346	115	77	..	2,175
Actual horse-power of engines used ..	2,293	1,479	854	191	176	..	4,993
Approx. value of land and buildings £	230,147	188,865	59,666	16,840	31,788	..	527,306
Approx. value of plant and machinery £	298,464	138,280	109,398	23,924	25,566	..	595,632
Total amount of wages paid £	251,184	131,014	45,431	20,271	15,413	..	463,313
Value of fuel used .. .. £	51,212	28,073	9,317	4,035	2,229	..	94,866
Value of raw material worked up £	3,667,706	1,681,598	1,447,291	261,850	166,027	..	7,224,472
Value of final output .. £	4,192,862	2,069,151	1,267,471	294,014	208,271	..	8,031,769
Value added in process of manufacture £	473,944	359,480	−189,137	28,129	40,015	..	712,431

(ii) *Development in Australia, 1922–23 to 1926–27.* The following return furnishes particulars of fellmongering and wool-scouring establishments in Australia for the last five years :—

FELLMONGERING AND WOOL-SCOURING WORKS.—AUSTRALIA, 1922–23 TO 1926–27.

Items.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
Number of factories	99	102	94	93	93
Number of employees	2,576	2,161	1,997	2,195	2,175
Actual horse-power of engines used ..	6,530	6,250	5,458	5,734	4,993
Approx. value of land and buildings £	542,373	594,547	570,258	537,540	527,306
Approx. value of plant and machinery £	733,919	766,689	668,960	704,789	595,632
Total amount of wages paid .. £	546,015	422,788	356,938	398,278	463,313
Value of fuel used .. .. £	108,019	84,445	75,706	85,308	94,866
Value of raw material worked up £	6,848,785	8,158,925	7,813,400	6,324,429	7,224,472
Value of final output .. .. £	8,602,162	8,977,412	8,343,973	7,130,008	8,031,769
Value added in process of manufacture £	1,645,358	734,042	454,867	720,271	712,431

The wool-scouring industry developed considerably under the régime of the Central Wool Committee, and during 1919–20 the record output of 107,726,653 lb. of scoured wool was produced. The production declined considerably since that date, however, and during 1926–27 only 101,610,339 lb. of greasy wool and 4,768,445 skins were treated for an output of 62,393,422 lb. of scoured wool.

4. Soap and Candle Factories.—(i) *Details for each State, 1926–27.* In Class II, soap and candle factories are the most important establishments. The manufacture of these two products is frequently carried on in the same factory, so that separate returns cannot be obtained ; it may, however, be noted that the manufacture of soap is the more important. The following table gives particulars of soap and candle factories in each State during the year 1926–27 :—

SOAP AND CANDLE FACTORIES, 1926–27.

Items.		N.S.W.	Vic.	Q'land.	S. Aust.	W.A.	Tas.	Australia.
Number of factories		26	18	10	6	5	1	66
Number of employees		1,111	705	175	250	225	41	2,507
Actual horse-power of engines employed		1,215	768	211	384	(a)	(a)	(b) 2,933
Approx. value of land and buildings	£	345,811	169,845	34,433	53,305	(a)	(a)	(b) 636,116
Approx. value of plant and machinery	£	384,772	235,705	34,285	118,467	(a)	(a)	(b) 843,399
Total amount of wages paid during year	£	206,579	142,554	37,957	47,162	(a)	(a)	(b) 493,505
Value of fuel used ..	£	36,814	40,000	2,333	9,633	(a)	(a)	(b) 112,885
Value of raw material worked up	£	852,017	662,763	106,132	188,646	(a)	(a)	(b) 1,949,717
Total value of output	£	1,518,472	1,111,040	207,343	309,687	(a)	(a)	(b) 3,421,879
Value added in process of manufacture	£	629,641	408,277	98,878	111,408	(a)	(a)	(b) 1,359,277

(a) Particulars not available for publication.

(b) Including Western Australia and Tasmania.

(ii) *Development in Australia, 1922–23 to 1926–27.* The following table gives similar particulars for the last five years as regards Australia as a whole :—

SOAP AND CANDLE FACTORIES.—AUSTRALIA, 1922–23 TO 1926–27.

Items.		1922–23.*a*	1923–24.*a*	1924–25.*a*	1925–26.*a*	1926–27.*a*
Number of factories	..	69	70	67	66	66
Number of employees	..	2,419	2,556	2,425	2,487	2,507
Actual horse-power and engines used	..	2,320	2,622	2,744	2,962	2,933
Approx. value of land and buildings	£	563,216	650,163	637,819	638,013	636,116
Approx. value of plant and machinery	£	759,192	834,678	775,027	893,712	843,399
Total amount of wages paid ..	£	415,681	438,748	454,149	492,789	493,505
Value of fuel used	£	75,728	77,976	83,138	104,897	112,885
Value of raw material worked up	£	1,790,540	1,729,946	2,037,505	2,145,157	1,949,717
Value of final output	£	3,042,506	2,915,030	3,365,010	2,592,832	3,421,879
Value added in process of manufacture	£	1,176,238	1,107,108	1,244,367	1,342,778	1,359,277

(a) Including other small establishments in Western Australia.

(iii) *Raw Material Used and Production, 1922–23 to 1926–27.* The following statement shows the quantities of certain raw material used, together with the production, in soap and candle factories in Australia during the years 1922–23 to 1926–27 :—

SOAP AND CANDLE FACTORIES.—RAW MATERIAL USED, AND PRODUCTION, AUSTRALIA, 1922–23 TO 1926–27.

Particulars.		1922–23.*a*	1923–24.*a*	1924–25.*a*	1925–26.*a*	1926–27.*a*
Tallow used	cwt.	482,422	434,622	483,756	470,101	473,787
Alkali used	,,	144,092	140,923	168,587	162,887	188,785
Coconut oil used	gal.	662,161	739,377	796,400	763,910	800,140
Soap made	cwt.	878,238	883,944	997,902	955,893	1,001,378
Candles made	,,	101,586	86,684	80,771	80,043	75,444

(a) Exclusive of Western Australia.

The total output for the year 1926–27 comprised the following quantities of the various kinds of soap manufactured :—Household, 794,294 cwt. ; toilet, 101,041 cwt. ; sand, 83,278 cwt. ; soft, 19,464 cwt. ; and other, 3,301 cwt.

5. Saw-mills, etc.—(i) *Details for States, 1926–27.* The most important industry in Class IV. is that of saw-milling. As separate particulars of forest saw-mills are not available for some of the States, both forest and other saw-mills, as well as joinery, moulding, and box factories, have been combined in the following table :—

SAW-MILLS, FOREST AND OTHER ; JOINERY, ETC., 1926–27.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	835	587	311	149	147	215	2,244
Number of employees ..	9,312	8,039	5,400	2,138	3,346	1,982	30,217
Actual horse-power of engines employed	24,287	16,921	11,229	4,207	9,293	3,876	69,813
Approximate value of land and buildings .. £	1,643,693	950,650	447,054	244,365	379,792	91,502	3,757,056
Approximate value of plant and machinery .. £	1,427,026	1,100,690	753,879	194,273	1,064,177	220,355	4,760,400
Total amount of wages paid during year .. £	1,905,101	1,667,775	1,036,770	433,826	718,020	312,514	6,074,006
Value of fuel used .. £	84,663	42,593	36,432	16,187	17,444	17,523	214,842
Value of raw material worked up .. .. £	4,640,006	2,085,389	1,867,087	1,405,809	937,229	161,486	11,097,006
Total value of output £	7,717,723	4,705,904	3,429,943	2,106,716	2,137,513	614,874	20,712,673
Value added in process of manufacture .. £	2,993,054	2,577,922	1,526,424	684,720	1,182,840	435,865	9,400,825

(ii) *Development in Australia, 1922–23 to 1926–27.* The development of forest and other saw-mills, etc., since 1922–23 is shown in the following table :—

SAW-MILLS, FOREST AND OTHER ; JOINERY, ETC.—AUSTRALIA, 1922–23 TO 1926–27.

Items.		1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
Number of establishments ..	..	2,067	2,315	2,312	2,340	2,244
Number of employees	..	31,173	34,092	34,041	33,309	30,217
Actual horse-power of engines used	..	57,615	64,580	69,099	72,924	69,813
Approx. value of land and buildings	£	3,525,233	3,693,174	3,870,005	4,119,714	3,757,056
Approx. value of plant and machinery	£	4,446,516	4,955,110	5,081,439	5,195,973	4,760,400
Total amount of wages paid ..	£	5,832,137	6,576,474	6,754,128	7,401,907	6,074,006
Value of fuel used	£	128,106	140,152	173,840	221,458	214,842
Value of raw material worked up ..	£	9,104,572	10,344,024	10,758,499	11,355,751	11,097,006
Value of final output	£	17,912,365	20,755,852	21,228,966	22,223,017	20,712,673
Value added in process of manufacture	£	8,679,687	10,271,676	10,296,627	10,645,808	9,400,825

The effect of the depression in the sawmilling industry is reflected in the decreases recorded in the manufacturing returns during the past two seasons. The sawmill output of native timber declined from 670,023,000 super. feet in 1923–24 to 613,131,000 super. feet in 1926–27.

6. Agricultural Implement Works.—(i) *General.* The manufacture of agricultural implements is an important industry in Australia, and is of particular interest, owing to the fact that it was one of the first to which it was sought to apply the so-called "New Protection." The articles manufactured include stripper-harvesters, header harvesters or reaper thrashers, strippers, reapers and binders, stump-jump and other ploughs, harrows, disc and other cultivators, winnowers, corn-shellers and baggers, drills, kerosene and petrol engines, and other implements employed in agriculture. The stripper harvester, which combines the stripper with a mechanism for winnowing and bagging grain, is an Australian invention, and is universally employed in agriculture.

(ii) *Details for States, 1926–27.* The following table gives particulars of the agricultural implement works in each State for the year 1926–27 :—

AGRICULTURAL IMPLEMENT WORKS, 1926–27.

Items.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories		30	73	4	42	6	..	155
Number of employees		735	3,820	248	1,501	332	..	6,636
Actual horse-power of engines employed		408	3,911	103	1,262	318	..	6,002
Approx. value of land and buildings	£	196,021	318,500	32,402	160,061	60,833	..	767,817
Approx. value of plant and machinery	£	62,177	357,325	26,027	199,601	41,691	..	686,821
Total amount of wages paid during year	£	165,942	912,325	50,894	293,753	78,811	..	1,501,725
Value of fuel used ..	£	5,708	51,620	3,300	18,093	3,930	..	82,651
Value of raw material worked up	£	195,552	911,398	80,805	334,617	52,120	..	1,574,492
Total value of output ..	£	458,606	2,228,570	167,884	777,065	187,324	..	3,819,449
Value added in process of manufacture	£	257,346	1,265,552	83,779	424,355	131,274	..	2,162,306

(iii) *Development in Australia, 1922–23 to 1926–27.* The Agricultural Implement industry declined considerably during the war years, but great progress has been made since 1922–23 and considerable increases have occurred in all the items enumerated in the following table. Details for the past five years are as follows :—

AGRICULTURAL IMPLEMENT WORKS.—AUSTRALIA, 1922–23 TO 1926–27.

Items.		1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
Number of factories		154	160	153	148	155
Number of employees		4,674	5,584	5,535	5,691	6,636
Actual horse-power of engines used ..		3,619	3,807	4,349	5,344	6,002
Approx. value of land and buildings	£	499,987	590,066	625,767	695,214	767,817
Approx. value of plant and machinery	£	508,921	595,151	559,413	622,165	686,821
Total amount of wages paid ..	£	941,778	1,126,002	1,181,572	1,270,555	1,501,725
Value of fuel used	£	54,546	63,096	70,680	71,137	82,651
Value of raw material worked up	£	1,190,905	1,442,679	1,569,456	1,385,089	1,574,492
Value of final output	£	2,685,342	3,132,305	3,283,008	3,228,502	3,819,449
Value added in process of manufacture	£	1,439,891	1,626,530	1,642,872	1,772,276	2,162,306

7. **Engineering Works.** Formerly it was impossible to record separate details for the engineering industry owing to the limited classification adopted by some of the States, but in 1926–27 an effort was made to obtain these particulars, and with one or two duplications of minor importance the following figures are representative of the engineering industry :—

ENGINEERING WORKS, 1926–27.

Items.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..		300	315	40	53	60	17	785
Number of employees ..		7,805	6,333	1,908	1,553	740	362	18,701
Actual horse-power of engines employed ..		8,012	7,451	1,911	1,476	1,148	445	20,443
Approximate value of land and buildings	£	1,471,506	1,035,185	182,362	126,621	137,998	40,580	2,994,252
Approximate value of plant and machinery	£	1,261,998	1,034,880	230,279	161,022	135,516	46,945	2,870,640
Total amount of wages paid during year ..	£	1,744,344	1,454,551	434,862	330,416	154,241	78,177	4,196,591
Value of fuel used	£	80,387	82,694	27,971	23,409	14,503	6,062	235,026
Value of raw material worked up ..	£	2,222,426	1,705,355	307,432	363,755	125,800	47,399	4,772,167
Total value of output	£	4,945,680	3,948,285	976,700	812,128	384,458	152,502	11,219,753
Value added in process of manufacture ..	£	2,642,867	2,160,236	641,297	424,964	244,155	99,041	6,212,560

In addition to engineering works which supply ordinary requirements, there is now a large number of establishments which engage in the manufacture of special classes of machinery and implements. The manufacture of mining, smelting, and textile machinery and apparatus forms an important section of this industry.

8. **Ironworks and Foundries.** The extension of the classification noted in the preceding sub-section has made possible the separate publication of details for the group of industries comprised under the heading of ironworks and foundries. This combination consists of ironworks, foundries, iron safes and doors, steel castings, iron bedsteads, sash weights, steel window frames and sashes, nut and bolt making, oxy-acetylene welding, springs, horse-shoes, screws, lift making, tools, and brickmakers' implements. Particulars for the year 1926–27 are as follows :—

IRONWORKS AND FOUNDRIES, 1926–27.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories	161	130	15	32	15	..	353
Number of employees ..	8,293	4,042	725	1,287	346	..	14,693
Actual horse-power of engines employed	36,037	6,541	857	1,398	393	..	45,226
Approximate value of land and buildings .. .. £	1,376,408	520,895	58,880	146,795	36,203	..	2,139,181
Approximate value of plant and machinery .. £	3,035,427	586,450	109,625	113,211	47,146	..	3,891,859
Total amount of wages paid during year .. £	2,066,011	916,762	127,796	259,424	81,023	..	3,451,016
Value of fuel used .. £	417,634	123,005	13,565	20,383	5,102	..	579,689
Value of raw material worked up .. .. £	8,533,078	1,111,426	175,531	312,497	98,566	..	10,231,098
Total value of output ..	11,779,843	2,630,786	384,175	666,538	216,795	..	15,678,137
Value added in process of manufacture .. .. £	2,829,131	1,396,355	195,079	333,658	113,127	..	4,867,350

9. **Railway and Tramway Workshops.**—(i) *Details for each State, 1926–27.* The railway and tramway workshops which form an important item in Class V. are chiefly State-owned institutions. The following table giving details concerning them includes, however, private and municipal establishments for manufacturing and repairing rolling-stock :—

RAILWAY AND TRAMWAY WORKSHOPS, 1926–27.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories ..	45	21	13	20	20	6	125
Number of employees ..	14,108	7,048	3,430	3,590	2,200	339	30,715
Actual horse-power of engines employed	12,931	6,854	3,482	2,526	2,796	349	28,938
Approximate value of land and buildings .. £	2,524,392	1,077,830	307,505	674,376	469,073	9,450	5,062,626
Approximate value of plant and machinery £	3,383,396	944,920	338,616	567,001	397,554	91,207	5,722,784
Total amount of wages paid during year .. £	3,623,214	1,755,202	920,916	936,160	498,150	81,560	7,815,202
Value of fuel used £	111,233	77,855	20,824	35,649	26,847	6,100	278,508
Value of raw material worked up .. .. £	2,660,063	2,037,577	479,213	509,071	332,905	24,548	6,043,377
Total value of output £	7,201,413	4,257,700	1,295,725	1,658,948	1,052,852	123,208	15,589,846
Value added in process of manufacture .. £	4,430,117	2,142,268	795,688	1,114,228	693,100	92,560	9,267,961

In addition to the above, a railway workshop is in operation in the Northern Territory. The work is confined almost exclusively to repairs to rolling-stock, etc., no new goods being manufactured. For the sake of convenience this establishment is not included in any of the tables in this chapter.

(ii) *Development in Australia, 1922–23 to 1926–27.* The following table shows the development of railway and tramway workshops in Australia since 1922–23 :—

RAILWAY AND TRAMWAY WORKSHOPS.—AUSTRALIA, 1922–23 TO 1926–27.

Items.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
Number of factories	112	122	123	121	125
Number of employees	23,672	25,130	26,345	28,558	30,715
Actual horse-power of engines used ..	16,603	17,830	20,965	26,168	28,938
Approx. value of land and buildings £	3,429,066	3,887,982	4,174,175	4,491,396	5,062,626
Approx. value of plant and machinery £	3,299,252	3,867,175	4,204,254	5,076,776	5,722,784
Total amount of wages paid .. £	5,591,520	5,799,183	6,140,676	7,192,869	7,815,202
Value of fuel used .. .. £	155,795	159,651	175,760	250,632	278,508
Value of raw material worked up £	4,459,599	4,596,829	4,919,728	6,008,231	6,043,377
Value of final output .. £	10,603,049	11,652,306	12,384,177	14,885,994	15,589,846
Value added in process of manufacture £	5,987,655	6,895,826	7,288,689	8,627,131	9,267,961

The growth of the railway and tramway systems, conjointly with heavy increases in passenger and goods traffic throughout Australia, has resulted in corresponding activity in workshops engaged in the manufacture or repair of rolling-stock, etc. During the past four years the number of employees has increased by more than 7,000, and the output has grown from £10,603,049 to £15,589,846.

10. **Metal Extraction and Ore Reduction Works.**—The following table gives particulars of metal extraction and ore reduction works. The classification of these works is not uniform in the several States, and the combination of industries is, therefore, somewhat unsatisfactory. The returns do not include particulars of plants used on mines.

METAL EXTRACTION AND ORE REDUCTION WORKS, 1926–27.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W.A. (*a*)	Tas.	Australia.
Number of factories	19	7	8	1	..	3	38
Number of employees	3,246	49	356	1,437	..	1,117	6,205
Actual horse-power of engines employed	27,640	104	3,573	*b*	..	*b*	*c* 70,797
Approx. value of land and buildings £	614,731	14,125	68,234	*b*	..	*b*	*c* 1,192,317
Approx. value of plant and machinery £	2,876,458	9,395	207,420	*b*	..	*b*	*c* 5,068,210
Total amount of wages paid during year £	1,008,437	12,365	71,244	*b*	..	*b*	*c* 1,873,991
Value of fuel used .. £	1,746,814	2,055	15,964	*b*	..	*b*	*c* 2,407,566
Value of raw material worked up £	6,513,010	117,751	111,825	*b*	..	*b*	*c* 12,257,107
Total value of output .. £	11,379,429	152,935	177,475	*b*	..	*b*	*c* 19,329,412
Value added in process of manufacture £	3,119,605	33,129	49,686	*b*	..	*b*	*c* 4,664,739

(*a*) In Western Australia all the plants are worked on the mines, and are therefore not included. (*b*) Information not available for publication. (*c*) Including South Australia and Tasmania.

11. Bacon-curing Factories.—(i) *Details for each State, 1926–27.* The following table gives particulars of factories engaged in bacon-curing in each State during the past year :—

BACON-CURING FACTORIES, 1926–27.

Items.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories		25	21	8	9	7	6	76
Number of employees		350	560	544	183	56	37	1,730
Actual horse-power of engines employed		847	1,821	1,239	386	196	102	4,591
Approximate value of land and buildings	£	170,773	194,085	184,455	34,498	27,877	10,718	622,406
Approximate value of plant and machinery ..	£	76,566	125,030	121,063	33,628	11,658	6,594	374,539
Total amount of salaries and wages paid ..	£	100,264	141,623	129,152	45,966	12,872	6,194	436,071
Value of fuel used ..	£	16,422	20,552	19,648	4,604	3,022	1,766	66,014
Value of raw material worked up	£	1,071,879	1,068,144	862,187	296,557	140,839	59,674	3,499 280
Total value of output	£	1,361,269	1,425,509	1,224,640	381,661	185,371	75,865	4,654,315
Value added in process of manufacture	£	272,968	336,813	342,805	80,500	41,510	14,425	1,089,021

(ii) *Quantity and Value of Production.* The following table shows the number of pigs killed and the quantity and value of the production of bacon-curing factories in each State for the year 1926–27 :—

BACON-CURING FACTORIES.—PIGS KILLED, AND PRODUCTION, 1926–27.

Particulars.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
PIGS KILLED.								
Number		253,907	230,391	204,539	59,010	(a)22,182	13,830	783,859
PRODUCTS.								
Bacon and ham ..	lb.	23,275,890	19,739,524	17,971,692	4,608,542	2,514,531	1,271,810	69,381.989
Lard	,,	672,992	783,414	767,376	199,166	103,518	75,000	2,601,466
VALUE.								
Bacon and ham ..	£	1,203,387	1,170,378	767,498	292,533	156,743	66,793	3,657,332
Lard	£	23,023	29,043	27,549	7,315	4,032	3,299	94,261
Other products ..	£	114,027	226,088	430,264	81,813	12,326	5,773	870,291

(a) In Western Australia, a portion of the bacon and ham treated in factories is imported and subsequently smoked in that State.

Bacon and ham and other pig products are dealt with more fully in Chapter XVIII. *Farmyard, Dairy, and Bee Products.*

12. Butter, Cheese, and Condensed Milk Factories.—(i) *Details for each State, 1926–27.* The subjoined table gives particulars of butter, cheese and condensed milk factories in each State during the year 1926–27 :—

BUTTER, CHEESE, AND CONDENSED MILK FACTORIES, 1926–27.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W.A.	Tas.	Australia.
Number of factories	167	182	125	58	11	36	579
Number of employees.. ..	1,371	2,320	1,168	324	86	150	5,419
Actual horse-power of engines employed	6,819	6,456	5,137	1,047	319	370	20,148
Approximate value of land and buildings .. .. £	742,589	915,035	344,462	207,657	46.287	41,626	2.297,656
Approximate value of plant and machinery .. £	810,410	1,054,245	583,685	124.433	39.244	37,027	2,649,044
Total amount of wages paid £	360,448	543,549	233,006	64,880	17,086	23,844	1,242,813
Value of fuel used .. £	101,127	143,344	46,344	14.120	3,072	6,997	315,004
Value of raw material worked up .. .. £	6,508,343	6,623,158	3,485,536	784,695	244,479	261,115	17,907,326
Total value of output £	7,799,040	7,813,409	4,551,867	948,503	279,463	344,828	21,737,110
Value added in process of manufacture .. .. £	1,189,570	1,046,907	1,019,987	149,688	31,912	76,716	3,514,780

(ii) *Development in Australia, 1922–23 to 1926–27.* The following table shows the progress of the factories in this industry during the past five years :—

BUTTER, CHEESE, AND CONDENSED MILK FACTORIES.—AUSTRALIA, 1922–23 TO 1926–27.

Items.		1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
Number of factories	..	573	583	600	585	579
Number of employees	..	5,141	5,233	5,826	5,490	5,419
Actual horse-power of engines used	..	13,149	14,836	15,934	17,989	20.148
Approx. value of land and buildings	£	1,490,729	1,770,157	1,863,439	1,964,887	2,297,656
Approx. value of plant and machinery	£	2,184,761	2,155,682	2,385,027	2,522,367	2,649,044
Total amount of wages paid ..	£	1,091,218	1,112,425	1,287,689	1,244,470	1,242,813
Value of fuel used	£	244,144	249,988	311,685	314,186	315.004
Value of raw material worked up..	£	17,464,258	16,542,862	19,080,739	19,248,172	17,907,326
Value of final output	£	20,746,782	19,526,119	22,726,214	22,971,416	21,737,110
Value added in process of manufacture	£	3,038,380	2,733,269	3,333,790	3,409,058	3,514,780

(iii) *Quantity and Value of Production.* The following table shows the quantity and value of butter, cheese, and condensed milk produced, and the quantity of milk used in butter, cheese, and condensed milk factories in each State during the past year :—

BUTTER, CHEESE, AND CONDENSED MILK FACTORIES.—PRODUCTION, 1926–27.

Particulars.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
MILK USED (,000 OMITTED).								
Butter factories ..	gals.	200,970	174,328	103,996	19,462	4,642	9,984	513,382
Cheese ,, ..	,,	5,206	5,441	9,798	3,627	..	734	24,806
Condensed milk factories	,,	(a)	10,816	(a)	..	..	..	(b) 14,972

(a) Information not available for publication.
(b) Including New South Wales and Queensland.

BUTTER, CHEESE, AND CONDENSED MILK FACTORIES.—PRODUCTION, 1926–27—*continued.*

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
PRODUCTS (,000 OMITTED).							
Butter .. .. lb.	91,727	78,109	49,055	9,858	2,464	4,269	235,482
Cheese .. .. ,,	5,085	5,482	9,243	3,709	..	740	24,259
Condensed and concentrated milk .. .. lb.	(*a*)	38,646	(*a*)	..	..	..	(*b*) 46,716
Powdered milk .. ,,	2,925	9,540	..	..	..	..	12,465
VALUE (,000 OMITTED).							
Butter .. .. £	7,092	5,938	3,986	786	192	316	18,310
Cheese .. .. £	222	247	404	138	..	29	1,040
Condensed and concentrated milk .. .. £	(*a*)	1,012	(*a*)	..	..	..	(*b*) 1,287
Powdered Milk .. £	185	429	..	..	..	..	614

(*a*) Information not available for publication.
(*b*) Including New South Wales and Queensland.

The butter, cheese, and condensed milk industries are dealt with more fully in the Chapter entitled *Farmyard, Dairy, and Bee Products.*

13. **Meat and Fish Preserving Works.**—These industries are now of considerable importance in Australia. Large freezing works have been installed at many ports throughout the continent for the purpose of freezing produce chiefly for export, while insulated space for the carriage of frozen produce is provided by a number of steamship companies trading between Australia and other parts of the world.

MEAT AND FISH PRESERVING WORKS, 1926–27.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories	3	14	13	1	5	3	39
Number of employees	251	739	3,029	8	279	24	4,330
Actual horse-power of engines employed	(*a*)	4,812	9,857	(*a*)	632	(*a*)	*b* 15,431
Approximate value of land and buildings .. .. £	(*a*)	690,020	1,461,623	(*a*)	307,979	(*a*)	*b* 2,506,071
Approximate value of plant and machinery .. £	(*a*)	401,310	921,733	(*a*)	402,926	(*a*)	*b* 1,755,136
Total amount of wages paid during year .. .. £	(*a*)	187,632	425,739	(*a*)	76,157	(*a*)	*b* 758,065
Value of fuel used .. £	(*a*)	23,389	71,467	(*a*)	8,383	(*a*)	*b* 113,679
Value of raw material worked up £	(*a*)	1,686,328	1,501,628	(*a*)	136,487	(*a*)	*b* 3,588,118
Total value of output £	(*a*)	2,068,333	1,968,756	(*a*)	290,931	(*a*)	*b* 4,695,015
Value added in process of manufacture .. .. £	(*a*)	358,616	395,661	(*a*)	146,061	(*a*)	*b* 993,218

(*a*) Not available for publication.
(*b*) Including New South Wales, South Australia and Tasmania.

Full particulars regarding quantities and values of beef, mutton, and lamb preserved by cold process, exported from Australia during a series of years, will be found in Chapter XVI.

14. **Biscuit Factories.**—The following table gives particulars regarding establishments at which the manufacture of biscuits, cakes, etc., was carried on in each State during the year 1926–27:—

BISCUIT, ETC., FACTORIES, 1926–27.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas. (a)	Australia.
Number of factories	72	9	27	17	22	..	147
Number of employees ..	2,871	1,329	739	454	379	..	5,772
Actual horse-power of engines employed	1,353	755	367	348	204	..	3,027
Approximate value of land and buildings .. .. £	577,622	134,560	124,100	97,168	52,028	..	985,478
Approximate value of plant and machinery .. £	222,237	187,665	81,469	76,291	33,955	..	601,617
Total amount of wages paid during year .. .. £	483,027	207,977	145,374	73,297	51,212	..	960,887
Value of fuel used .. £	55,147	23,051	9,590	8,231	6,961	..	102,980
Value of raw material worked up £	1,540,832	732,974	276,589	256,070	182,151	..	2,988,616
Total value of output £	2,645,767	1,220,747	621,257	400,062	287,101	..	5,174,934
Value added in process of manufacture .. .. £	1,049,788	464,722	335,078	135,761	97,989	..	2,083,338

(a) Included with confectionery.

15. **Jam and Fruit Preserving, Pickles, Sauces, and Vinegar Factories.**—(i) *Details for each State, 1926–27.* The subjoined table gives particulars of factories at which these industries were carried on in each State during the year 1926–27.

JAM AND FRUIT PRESERVING, PICKLES, ETC., FACTORIES, 1926–27.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia
Number of factories	45	58	13	17	10	21	164
Number of employees ..	1,799	2,604	373	560	54	729	6,119
Actual horse-power of engines employed	857	1,860	225	275	67	1,244	4,528
Approximate value of land and buildings .. .. £	343,491	442,175	46,823	112,224	14,065	126,057	1,084,835
Approximate value of plant and machinery .. £	154,894	327,505	32,494	68,607	7,152	44,119	634,771
Total amount of wages paid during year .. .. £	221,774	497,011	49,565	89,239	5,527	111,108	974,224
Value of fuel used .. £	17,752	35,580	3,148	7,479	365	14,987	79,311
Value of raw material worked up £	911,920	1,502,429	228,192	326,039	65,565	477,243	3,511,388
Total value of output £	1,457,957	2,427,373	337,283	514,215	75,737	667,500	5,480,065
Value added in process of manufacture .. .. £	528,285	889,364	105,943	180,697	9,807	175,270	1,889,366

(ii) *Development in Australia, 1922–23 to 1926–27.* The following table refers to jam and fruit preserving, etc., establishments in Australia for the last five years :—

JAM AND FRUIT PRESERVING, PICKLES, ETC., FACTORIES.—AUSTRALIA, 1922–23 TO 1926–27.

Items.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
Number of factories	170	175	164	165	164
Number of employees	5,983	6,600	6,278	6,189	6,119
Actual horse-power of engines employed ..	3,698	3,941	3,989	4,520	4,528
Approx. value of land and buildings £	895,513	981,354	937,288	1,038,819	1,084,835
Approx. value of plant and machinery £	606,716	599,857	616,675	615,452	634,771
Total amount of wages paid .. £	781,429	885,104	881,317	902,859	974,224
Value of fuel used .. .. £	56,718	63,406	69,152	70,549	79,311
Value of raw material worked up £	2,704,356	2,939,187	3,127,593	3,135,573	3,511,388
Total value of output .. .. £	4,549,216	4,722,383	4,995,671	5,002,487	5,480,065
Value added in process of manufacture £	1,788,142	1,719,790	1,798,926	1,796,365	1,889,366

The progress of the jam-making industry was very marked during the war years, when considerable quantities were exported overseas for the supply of army requirements. With the loss of this trade on the termination of the war, production declined considerably, but a noticeable improvement was recorded in 1926–27, when 85,687,291 lb. were manufactured, compared with 67,388,784 lb. during the previous year. The output of preserved fruit has grown to considerable proportions, and during 1926–27, 57,583,021 lbs. were processed, while the production of pickles and sauces is increasing.

(iii) *Production.* The following table shows the quantity and value of jams, pickles, and sauces manufactured in each State during 1926–27 :—

JAMS, PRESERVED FRUIT, PICKLES AND SAUCES.—OUTPUT, 1926–27.

Particulars.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
QUANTITY (,000 OMITTED).								
Jams	lb.	22,611	33,692	5,570	8,823	(*a*)	14,991	85,687
Pulp	,,	3,561	12,367	374	4,616	(*a*)	11,254	32,172
Fruit, preserved ..	,,	8,240	37,610	6,244	2,627	(*a*)	2,862	57,583
Pickles	pints	2,386	2,615	..	760	(*b*)	(*b*)	(*c*) 5.994
Sauces	,,	6,258	7,385	943	5,145	(*b*)	(*b*)	(*c*) 19,925
VALUE.								
Jams	£	652,872	907,249	148,467	214,783	(*a*)	405,467	2,328,838
Pulp	£	28,638	82,702	3.070	22,514	(*a*)	146,167	283,091
Fruit, preserved ..	£	178,320	797,364	130,399	57,899	(*a*)	76,226	1,240,208
Pickles	£	81,499	92,350	..	30,684	(*b*)	(*b*)	(*c*) 212,357
Sauces	£	357,065	259,660	22,126	166,456	(*b*)	(*b*)	(*c*) 812,467

(*a*) Particulars not available. (*b*) Particulars not available for publication.
(*c*) Including Western Australia and Tasmania.

16. **Confectionery Factories.**—(i) *Details for each State, 1926–27.* The growth of this industry will be apparent when it is stated that at the close of 1900 there were in New South Wales only 16 establishments, with 706 employees, and in Victoria 16 establishments, employing 731 persons, the plant and machinery in the former State being valued at £2,815, and in the latter at £19,070. Returns for 1926–27 are given hereunder :—

CONFECTIONERY FACTORIES, 1926–27.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas. (*a*)	Australia.
Number of factories	98	134	10	22	12	10	286
Number of employees	3,172	3,912	573	442	302	647	9,048
Actual horse-power of engines employed	3,589	7,834	493	554	262	1,434	14,166
Approximate value of land and buildings .. .. £	977,248	635,990	66,318	82,145	63,799	258,733	2,084,233
Approximate value of plant and machinery .. .. £	1,008,137	982,030	44,965	89,124	66,226	121,031	2,311,513
Total amount of wages paid during year .. .. £	503,607	651,619	67,816	57,667	46,285	99,785	1,426,779
Value of fuel used .. £	54,199	78,223	4,906	7,914	4,710	15,229	165,181
Value of raw material worked up £	1,559,435	1,736,120	97,374	177,203	137,413	210,545	3,918,090
Total value of output .. £	2,917,925	3,002,436	297,282	294,972	208,472	376,824	7,097,911
Value added in process of manufacture .. .. £	1,304,291	1,188,093	195,002	109,855	66,349	151,050	3,014,640

(*a*) Including Biscuits.

(ii) *Development in Australia, 1922–23 to 1926–27.* The growth of the confectionery industry during the past four years is exhibited in the following table :—

CONFECTIONERY FACTORIES.—AUSTRALIA, 1922–23 TO 1926–27.

Items.		1922–23.	1923–24.	1924–25. (*a*)	1925–26. (*a*)	1926–27. (*a*)
Number of factories	..	258	258	276	267	286
Number of employees	..	7,945	8,724	8,818	8,849	9,048
Actual horse-power of engines employed	..	6,434	11,668	12,725	13,047	14,166
Approx. value of land and buildings	£	1,593,346	1,773,340	2,021,439	2,014,563	2,084,233
Approx. value of plant and machinery	£	1,746,738	1,951,422	2,104,208	2,199,860	2,311,513
Total amount of wages paid during year	£	1,159,980	1,262,099	1,349,717	1,391,114	1,426,779
Value of fuel used	£	114,947	126,547	155,050	166,846	165,181
Value of raw material worked up	£	3,336,349	3,318,428	3,619,005	3,884,045	3,918,090
Total value of output	£	5,941,691	6,162,631	6,623,828	6,993,566	7,097,911
Value added in process of manufacture	£	2,490,395	2,717,656	2,849,773	2,942,675	3,014,640

(*a*) Including Biscuits in Tasmania.

The confectionery industry has expanded considerably during recent years, largely as a result of the stimulus afforded by the embargo placed on the importation of luxuries during the period of the war. The establishments engaged therein found employment for 9,048 persons in 1926–27, and the value of the output amounted to £7,097,911, or more than 19 per cent. greater than the value of the production in 1922–23. The Australian market has been captured, and an export trade is being developed. Several large British manufacturers of confectionery have established branch works in Australia.

17. **Flour Mills.**—(i) *Details for States, 1926–27.* The following table shows the position of the flour-milling industry in each State in 1926–27 :—

FLOUR MILLS, 1926–27.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust. (a)	W. Aust.	Tas. (a)	Australia.
Number of factories ..	57	44	10	37	17	10	175
Number of employees ..	1,224	1,094	274	537	426	115	3,670
Actual horse-power of engines employed	7,231	6,073	1,301	3,104	2,802	525	21,036
Approximate value of land and buildings .. £	755,694	443,080	127,170	190,952	196,987	60,350	1,774,233
Approximate value of plant and machinery .. £	924,531	603,095	150,772	297,072	191,764	54,377	2,221,611
Total amount of wages paid during year .. £	318,610	255,058	63,468	115,609	85,844	26,575	865,164
Value of fuel used .. £	74,862	50,068	10,225	31,755	20,299	3,799	191,008
Value of raw material worked up .. .. £	6,122,755	5,037,318	856,395	1,915,617	1,770,521	372,136	16,074,742
Total value of output £	7,098,456	5,789,618	1,044,861	2,201,740	2,026,823	436,496	18,597,994
Value added in process of manufacture .. .. £	900,839	702,232	178,241	254,368	236,003	60,561	2,332,244

(a) The manufacture of cornflour, oatmeal, etc., was also carried on in some of these establishments.

(ii) *Production of Flour and By-products, 1922–23 to 1926–27.* The production of flour by the mills in each State for the years 1922–23 to 1926–27 was as follows :—

FLOUR MILLS.—PRODUCTION OF FLOUR, 1922–23 TO 1926–27.

Year (b).	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
	Tons.[a]	Tons.[a]	Tons.[a]	Tons.[a]	Tons.[a]	Tons.[a]	Tons.[a]
1922–23 ..	354,704	352,002	51,476	109,761	94,316	23,220	985,479
1923–24 ..	409,645	382,204	54.244	113,436	107,990	25,337	1,092,856
1924–25 ..	395,409	359,597	52,592	117,042	122,192	21,866	1,068,698
1925–26 ..	434,407	336,704	61,587	138,127	190,369	24,774	1,185,968
1926–27 ..	431,532	360,051	52,959	140.426	133,919	22,861	1,141,748

(a) Tons of 2,000 lb. (b) See general note on first page of this Chapter.

The total production of flour in Australia for the last year, viz., 1,141,748 tons, was valued at £14,749,474. In addition, 464,375 tons of bran and pollard, valued at £3,562,612, were made. The total quantity of wheat ground was 54,168,722 bushels.

18. **Sugar Mills.**—(i) *Details for 1926–27.* The following table shows the position of the cane-crushing branch of the sugar-making industry in Queensland and New South Wales in 1926–27. Sugar-cane is not grown in the other States. Details regarding the area, yield, etc., of sugar-cane will be found in Chapter XVII., *Agricultural Production.*

SUGAR MILLS, 1926–27.

Items.		N.S.W.	Queensland.	Australia.
Number of factories		3	36	39
Number of employees		447	6,502	6,949
Actual horse-power of engines employed ..		2,097	26,995	29,092
Approximate value of land and buildings	£	132,865	921,168	1,054,033
Approximate value of plant and machinery	£	529,116	5,922,475	6,451,591
Total amount of wages paid during year ..	£	109,831	1,364,540	1,474,371
Value of fuel used	£	15,415	209,287	224,702
Value of raw material worked up ..	£	414,490	7,163,294	7,577,784
Total value of output	£	671,004	9,605,044	10,276,048
Value added in course of manufacture ..	£	241,099	2,232,463	2,473,562

The products of the sugar mill are raw sugar and molasses, the former being sent to the refineries in different parts of Australia for further treatment. Part of the molasses produced is used for distillation, part is prepared for human consumption, part is turned into food-cake for cattle, and part is used for manuring land, but a considerable quantity is allowed to run to waste.

(ii) *Progress of Industry.* (*a*) *New South Wales.* The following table shows the progress of this industry in New South Wales since 1922–23 :—

SUGAR MILLS.—NEW SOUTH WALES, 1922–23 TO 1926–27.

Items.		1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
Number of factories ..		3	3	3	3	3
Number of employees ..		446	445	445	487	447
Cane crushed ..	tons	147,992	132,084	228,978	297,335	230,254
Sugar produced ..	tons	18,580	16,829	26,682	32,385	26,604
Molasses produced	gals.	816,720	752,650	1,313,400	1,820,000	1,371,700

The number of New South Wales mills has been reduced to three during recent years owing chiefly to the tendency towards concentration of cane-crushing in mills fitted with modern machinery, and the consequent closing of the small home mill. The stability afforded the sugar industry by Government assistance referred to in the chapter dealing with agriculture has been responsible for considerable progress in the cultivation of sugar cane, and consequently increased activity has occurred in the sugar mills of New South Wales and Queensland during the last three years.

(*b*) *Queensland.* Details for Queensland from 1911 onwards are given hereunder.

SUGAR MILLS.—QUEENSLAND, 1911 TO 1926–27.

Items.		1911.	1923.	1924–25.	1925–26.	1926–27.
Number of factories ..		49	37	37	40	39
Number of employees ..		4,295	5,555	6,250	7,322	6,949
Cane crushed ..	tons	1,534,451	2,045,808	3,175,377	3,653,860	2,930,860
Sugar produced ..	tons	173,296	269,175	400,645	479,023	457,914
Molasses—						
Sold to distillers and others ..	gals.	2,393,669	2,657,252	5,367,352	3,749,788	3,301,557
Used as fodder ..	gals.	789,564	2,448,595	2,236,788	2,176,649	2,828,118
Used as manure	gals.	223,000	209,600	196,080	1,287,400	89,600
Run to waste or burnt (*a*)	gals.	1,847,333	4,883,071	5,921,246	9,360,367	7,295,155
In Stock ..	gals.	1,197,626	866,460	1,398,837	1,590,212	1,172,003
Total Molasses (*a*)	gals.	6,451,192	11,064,978	15,120,303	18,164,416	14,686,433

(*a*) Quantity recorded ; no record is kept of large quantities run to waste.

19. Sugar Refineries.—The establishment of the sugar-refining industry considerably antedates the establishment of the sugar-milling industry, the raw material operated upon being originally brought chiefly from Mauritius and the East. In 1926–27 there were two sugar refineries in each of the States of Victoria and Queensland, and one in each of the States of New South Wales and South Australia. The quantity of raw sugar operated upon amounted to 331,463 tons for a yield of 320,842 tons of refined sugar, valued at £11,280,265.

20. Breweries.—(i) *Details for each State, 1926–27.* The following table gives particulars concerning breweries in each State :—

BREWERIES, 1926–27.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust. (*a*).	Tas.	Australia.
Number of breweries	10	10	10	6	10	2	48
Number of employees	1,250	1,156	564	371	420	83	3,844
Actual horse-power of engines employed	3,515	5,123	1,858	1,097	1,265	285	13,143
Approximate value of land and buildings .. .. £	815,030	621,980	293,888	187,467	232,914	54,500	2,205,779
Approximate value of plant and machinery .. .. £	1,079,896	810,900	314,727	187,540	234,176	83,080	2,710,319
Total amount of wages paid during year .. £	374,296	376,419	150,713	115,800	133,507	22,351	1,173,086
Value of fuel used .. £	94,996	66,509	32,173	27,549	21,110	6,443	248,780
Value of raw material worked up £	1,221,142	1,165,535	206,546	337,741	330,741	53,736	3,315,441
Total value of output .. £	3,009,909	2,605,704	710,223	772,696	706,023	137,423	7,941,978
Value added in process of manufacture .. £	1,693,771	1,373,660	471,504	407,406	354,172	77,244	4,377,757

(*a*) Includes malting.

(ii) *Development in Australia, 1922–23 to 1926–27.* The following table shows the progress of this industry during the past four years :—

BREWERIES.—AUSTRALIA, 1922–23 TO 1926–27.

Items.		1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
Number of breweries	..	61	57	56	52	48
Number of employees	..	3,774	3,854	3,965	3,812	3,844
Actual horse-power of engines used	..	11,492	12,761	13,403	13,246	13,143
Approx. value of land and buildings	£	1,710,321	1,778,442	1,996,644	2,141,886	2,205,779
Approx. value of plant and machinery	£	2,140,654	2,247,811	2,506,284	2,595,955	2,710,319
Total amount of wages paid ..	£	1,027,689	1,063,250	1,093,323	1,194,424	1,173,086
Value of fuel used	£	194,324	197,596	241,918	283,300	248,780
Value of raw material worked up ..	£	2,913,409	2,787,891	3,019,592	3,577,212	3,315,441
Value of final output	£	6,872,682	6,887,462	7,117,029	7,842,180	7,941,978
Value added in process of manufacture	£	3,764,949	3,901,975	3,855,519	3,981,668	4,377,757

The main feature in the history of the brewing industry, which was established at an early date in Australia, has been the change from the small local brewery in every township of moderate size to the large centralized city brewery. This, however, has not been so much in evidence during the period embraced in the above table, the reduction of the number of establishments during recent years being mainly due to several large amalgamations. The total value of output of breweries in Australia increased from £6,872,682 in 1922–23 to £7,941,978 in 1926–27, and the quantity of ale and stout brewed rose from 66,491,395 to 73,667,050 gallons during the same period. The consumption of ale and stout per head of the population remains fairly constant in Australia, and for the year 1926–27 averaged nearly 11½ gallons.

(iii) *Materials Used and Production.* The table below shows the quantity of raw material used and the quantity and value of ale and stout brewed in each State during the year 1926–27.

BREWERIES.—MATERIALS USED AND PRODUCTION, 1926–27.

Particulars.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Australia.
				RAW MATERIAL USED.				
Malt ..	bushels	929,292	814,298	215,818	207,005	173,028	37,770	2,377,211
Hops ..	lb.	897,046	831,317	203,826	226,187	191,829	61,477	2,411,682
Sugar ..	cwt.	106,743	121,666	25,849	28,943	28,015	4,307	315,523
				RAW MATERIAL USED PER 1,000 GALLONS OF ALE AND STOUT PRODUCED.				
Malt ..	bushels	33·95	30·75	32·33	31·62	30·81	38·85	32·27
Hops ..	lb.	32·77	31·39	30·53	34·55	34·16	63·23	32·74
Sugar ..	cwt.	3·90	4·59	3·87	4·42	4·99	4·43	4·28
				ALE AND STOUT BREWED.				
Quantity	gallons	27,372,445	26,483,760	6,675,966	6,547,460	5,615,201	972,218	73,667,050
Value(*a*)	£	2,964,969	2,605,704	710,223	767,154	679,904	137,307	7,865,261

(*a*) Exclusive of excise duty.

21. **Distilleries.**—Distilleries are located in all the States with the exception of Western Australia and Tasmania. Complete details, however, are not obtainable, as the particulars for New South Wales factories are not available. The materials used in all distilleries during 1926–27 comprised 833,645 cwt. of molasses, 212,022 bushels of malt, and 11,016,665 gallons of wine, while the output of distilled spirit amounted to 6,475,922 proof gallons.

22. **Tobacco, etc., Factories.**—(i) *Details for each State, 1926–27.* During the year 1926–27 there were twenty-four establishments in which the manufacture of tobacco cigars, and cigarettes was carried on. There were no factories engaged in this industry in Queensland or Tasmania.

TOBACCO, CIGAR, AND CIGARETTE FACTORIES, 1926–27.

Items.		N.S.W.	Victoria.	S. Aust.	W. Aust.	Australia.
Number of factories		9	12	1	2	24
Number of employees		2,464	1,701	24	97	4,286
Actual horse-power and engines employed		997	615	..	33	1,645
Approx. value of land and buildings	£	410,698	251,450	(*a*)	(*a*)	*b* 675,689
Approx. value of plant and machinery	£	335,782	168,090	(*a*)	(*a*)	*b* 512,441
Total amount of wages paid during year	£	449,816	347,636	(*a*)	(*a*)	*b* 812,300
Value of fuel used	£	12,972	8,422	(*a*)	(*a*)	*b* 22,032
Value of raw material worked up ..	£	3,354,552	1,147,448	(*a*)	(*a*)	*b* 4,523,086
Total value of output	£	4,817,651	1,921,004	(*a*)	(*a*)	*b* 6,800,026
Value added in process of manufacture	£	1,450,127	765,134	(*a*)	(*a*)	*b* 2,254,908

(*a*) Not available for publication. (*b*) Including South Australia and Western Australia.

(ii) *Development in Australia.* This industry was among the first to be established in Australia. In 1861 New South Wales had eleven factories, producing 177,744 lb. of manufactured tobacco; in the same year there was one factory in Victoria, but the quantity of tobacco manufactured is not available. The Australian market has for many years been largely supplied with local manufactures. The imports into Australia during 1926–27 comprised—manufactured tobacco 1,273,873 lb., cigars 121,779 lb., and cigarettes 744,571 lb., while the quantities manufactured in Australian factories were respectively 15,008,232 lb., 409,623 lb., and 5,309,319 lb. The following tables show the development of the tobacco manufacturing industry in Australia during recent years :—

TOBACCO, CIGAR, AND CIGARETTE FACTORIES.—AUSTRALIA, 1922–23 TO 1926–27.

Items.		1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
Number of factories	..	29	28	27	26	24
Number of employees	..	4,319	4,312	4,421	4,325	4,286
Actual horse-power of engines used	..	1,466	1,609	1,676	1,713	1,645
Approx. value of land and buildings	£	493,597	531,273	620,694	640,289	675,689
Approx. value of plant and machinery	£	427,825	478,477	497,034	508,100	512,441
Total amount of wages paid ..	£	734,070	742,697	781,471	800,615	812,300
Value of fuel used	£	20,612	18,954	27,172	28,053	22,032
Value of raw material worked up..	£	4,603,218	4,500,304	4,613,357	4,589,301	4,523,086
Value of final output	£	6,690,701	6,645,451	6,927,087	6,892,332	6,800,026
Value added in process of manufacture	£	2,066,871	2,126,193	2,286,558	2,274,978	2,254,908

Leaf Used and Production.

Leaf used	1,000 lb.	17,104	17,104	18,073	18,661	18,610
Tobacco made	,,	14,636	14,145	14,978	15,405	15,008
Cigars	,,	483	431	470	456	410
Cigarettes	,,	4,384	4,794	4,873	5,134	5,309

Although the manufacturing side of the tobacco industry is so firmly established in Australia, the production of locally-grown leaf is comparatively small, and manufacturers are dependent on imported leaf for the supply of their raw material. In this connexion, however, see § 17, 4, p. 713, Chapter XVII., *Agricultural Production.* The respective quantities of Australian and imported leaf used during 1926–27 were 1,212,794 and 17,396,718 lb.

23. **Woollen, and Tweed Mills.**—(i) *Details for each State, 1926–27.* The manufacture of woollens and tweeds was established in Australia at an early period in its history, and was under Government control, the first record in New South Wales dating back to 1801, when a few blankets were made by the convicts; the first record in Victoria was in 1867. The following table, which gives particulars for 1926–27 shows that the industry is now well established :—

WOOLLEN AND TWEED MILLS, 1926–27.

Items.		N.S.W.	Victoria.	Q'land.	S. Aust.	W.A.	Tas.	Australia.
Number of factories		14	27	2	3	1	6	53
Number of employees		2,704	6,717	354	232	126	935	11,068
Actual horse-power of engines employed		5,222	13,995	714	540	300	1,670	22,441
Approx. value of land and buildings	£	498,402	1,047,445	(*a*)	(*a*)	(*a*)	246,952	*b* 1,892,108
Approx. value of plant and machinery	£	959,608	2,255,445	(*a*)	(*a*)	(*a*)	314,163	*b* 3,779,316
Total amount of wages paid during year	£	398,769	997,217	(*a*)	(*a*)	(*a*)	115,978	*b* 1,607,595
Value of fuel used ..	£	56,170	151,998	(*a*)	(*a*)	(*a*)	27,014	*b* 251,093
Value of raw material worked up	£	814,260	2,361,770	(*a*)	(*a*)	(*a*)	294,250	*b* 3,681,164
Total value of output ..	£	1,483,390	4,581,445	(*a*)	(*a*)	(*a*)	541,184	*b* 6,986,296
Value added in process of manufacture	£	612,960	2,067,677	(*a*)	(*a*)	(*a*)	219,920	*b* 3,054,039

(*a*) Information not available for publication.
(*b*) Including Queensland, South Australia and Western Australia.

(ii) *Development in Australia, 1922–23 to 1926–27.* The progress of woollen and tweed milling in Australia during the last four years is shown in the following table :—

WOOLLEN AND TWEED MILLS.—AUSTRALIA, 1922–23 TO 1926–27.

Items.		1922–23.	1923–24.	1924–25.	1925-26.	1926–27.
Number of factories	..	40	47	49	50	53
Number of employees	..	6,928	7,532	7,941	8,735	11,068
Actual horse-power of engines used	..	12,347	15,406	16,310	18,426	22,441
Approx. value of land and buildings	£	1,131,396	1,426,493	1,620,318	1,659,446	1,892,108
Approx. value of plant and machinery	£	2,428,133	3,043,586	3,297,229	3,247,602	3,779,316
Total amount of wages paid ..	£	991,801	1,043,298	1,102,718	1,222,596	1,607,595
Value of fuel used	£	127,573	128,487	165,724	203,237	251,093
Value of raw material worked up ..	£	2,511,204	2,824,176	3,197,778	3,400,316	3,681,164
Total value of output	£	4,712,964	4,863,657	5,071,124	5,758,267	6,986,296
Value added in process of manufacture	£	2,074,187	1,910,994	1,707,622	2,154,714	3,054,039

(iii) *Quantity and Value of Production.* The production consists chiefly of tweed cloths, flannels, rugs, blankets and yarn, all of which have acquired a reputation for purity and durability. Detailed particulars for the several States are not available for publication. The total length of tweed and cloth manufactured in Australia during 1926–27 was 7,943,840 yards. In New South Wales 2,378,555 yards of tweed and cloth, and in Victoria, 4,854,389 yards were manufactured. The production of flannel amounted to 9,454,030 yards, while blankets, shawls, and rugs to the number of 1,141,510 were manufactured. The output of yarn reported was 4,359,672 lb., most of which was produced in Victoria.

In addition to the woollen and tweed factories, there were 255 hosiery and knitting mills operating throughout Australia during 1926–27. These establishments provided employment for 10,020 persons, of whom 8,087 were females, and the value of their output amounted to £5,310,228.

Cotton ginning has been carried on intermittently in the Northern States, and the recent development in cotton growing has led to the establishment of modern ginning plants at convenient centres in Queensland. In New South Wales during 1923–24 the first up-to-date mill for the manufacture of cotton goods was erected. There were seven establishments treating cotton in Australia during 1926–27, and these employed 744 hands, while the value of the output was £558,204.

24. **Boot Factories.**—(i) *Boot and Shoe Factories, 1926–27.* Among the manufactories of Australia the boot and shoe industry holds an important place in regard to employment afforded and extent of output. In certain items the operations of these factories have been rather obscured in recent years by the inclusion in the returns of a large number of repair establishments, but this difficulty has been avoided by the collection of separate statistics for each industry, and in the following table the details relate to boot and shoe factories as distinct from those devoted to repairing and bespoke work : —

BOOT AND SHOE FACTORIES, 1926–27.

Items.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories		104	204	18	18	10	6	360
Number of employees		5,469	12,192	1,252	636	431	237	20,217
Actual horse-power of engines employed		1,806	3,366	206	279	213	70	6,030
Approx. value of land and buildings	£	558,528	868,390	59,591	66,802	43,264	13,615	1,610,790
Approx. value of plant and machinery ..	£	261,264	602,050	40,438	32,945	31,749	7,602	976,048
Total amount of wages paid during year	£	896,991	2,009,337	193,177	94,783	58,444	31,943	3,284,675
Value of fuel used ..	£	13,350	40,565	2,183	1,800	1,134	787	59,819
Value of raw material worked up	£	1,280,907	3,097,875	242,628	139,118	117,919	50,063	4,928,510
Total value of output	£	2,587,199	6,105,072	494,337	254,406	204,344	94,121	9,739,479
Value added in process of manufacture	£	1,292,942	2,966,632	249,526	113,488	85,291	43,271	4,751,150

(ii) *Boot repairing, including bespoke work.* The introduction of small power plants in repairing shops has brought this class of establishment within the meaning of a factory for statistical purposes. These shops have spread rapidly throughout the Commonwealth, and during 1926–27 the number recorded amounted to 931, in which 1,976 hands were employed. The sum of £194,913 was distributed in salaries and wages, and the total output value was £846,363.

(iii) *Quantity and Value of Production.* The number and value of boots, shoes, and slippers made at factories in each State are shown in the following table :—

BOOT AND SHOE FACTORIES.—OUTPUT, 1926–27.

Particulars.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
QUANTITY (,000 OMITTED).								
Boots and shoes ..	pairs	3,970	8,147	728	452	357	152	13,806
Slippers	,,	1,129	2,100	12	25	366	..	3,632
Uppers (*a*) ..	,,	41	49	2	8	1	3	104
VALUE.								
Boots and shoes ..	£	2,361,895	5,408,922	489,338	231,042	188,195	93,326	8,772,718
Slippers ..	£	106,093	333,217	3,889	5,943	22,112	..	471,254
Uppers (*a*) ..	£	13,624	11,928	1,207	4,361	1,175	796	33,091

(*a*) Made for other than factory use.

25. Clothing (Tailoring and Slop) Factories.—(i) *Details for each State, 1926–27.* The importance of this industry in the several States is shown in the following table :—

CLOTHING (TAILORING AND SLOP) FACTORIES, 1926–27.

Items.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories		538	530	135	144	78	40	1,465
Number of employees		11,835	9,182	3,023	2,499	1,308	562	28,409
Actual horse-power of engines employed		823	546	234	125	79	26	1,833
Approximate value of land and buildings	£	2,060,204	1,228,725	351,793	427,455	215,995	84,550	4,368,722
Approximate value of plant and machinery ..	£	156,981	106,860	51,645	28,336	18,584	5,517	367,923
Total amount of wages paid during year	£	1,589,226	1,196,959	358,082	299,478	161,212	59,983	3,664,940
Value of fuel used ..	£	24,884	21,916	7,162	6,727	2,987	1,066	64,742
Value of raw material worked up	£	2,218,442	2,000,299	490,215	425,291	264,763	57,953	5,456,963
Total value of output	£	4,678,121	3,807,553	1,070,852	896,601	511,790	153,366	11,118 283
Value added in process of manufacture	£	2,434,795	1,785,338	573,475	464,583	244,040	94,347	5,596,578

(ii) *Development in Australia, 1922–23 to 1926–27.* The tailoring and slop branch of the clothing industry has made little progress during the past four years. The number of factories has increased and their equipment has been added to, but the persons employed have declined and the value of raw material used and output have remained practically constant. It is of interest to note that employment in this industry is approximately 2,000 less than the highest pre-war figure. Details for the past five years are as follows :—

CLOTHING (TAILORING AND SLOP) FACTORIES.—AUSTRALIA, 1922–23 TO 1926–27.

Items.		1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
Number of factories	..	1,418	1,440	1,472	1,481	1,465
Number of employees	..	28,822	28,148	28,600	28,294	28,409
Actual horse-power of engines used	..	1,617	1,655	1,823	1,787	1,833
Approx. value of land and buildings	£	3,445,473	3,899,477	4,291,681	4,403,707	4,368,772
Approx. value of plant and machinery	£	328,347	358,603	374,079	376,509	367,923
Total amount of wages paid ..	£	3,370,258	3,402,069	3,482,436	3,634,760	3,664,940
Value of fuel used	£	56,194	56,492	58,943	65,638	64,742
Value of raw material worked up ..	£	5,521,496	5,257,702	5,407,676	5,582,354	5,456,963
Total value of output	£	10,719,900	10,527,577	10,881,684	11,274,588	11,118,283
Value added in process of manufacture	£	5,142,210	5,213,388	5,415,065	5,626,596	5,596,578

26. **Dressmaking and Millinery Establishments.**—(i) *Details for each State, 1926–27.* Particulars of dressmaking and millinery establishments are given in the following table :—

DRESSMAKING AND MILLINERY ESTABLISHMENTS, 1926–27.

Items.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia
Number of factories	257	505	36	52	45	17	912
Number of employees ..	3,694	8,820	607	1,063	698	169	15,051
Actual horse-power of engines employed	141	630	14	45	72	4	906
Approximate value of land and buildings .. .. £	913,364	1,345,700	48,222	107,894	69,620	13,732	2,498,532
Approximate value of plant and machinery .. £	38,844	110,365	3,860	7,487	9,276	1,403	171,235
Total amount of wages paid during year .. .. £	350,606	923,184	62,000	92,827	66,366	12,390	1,507,373
Value of fuel used .. £	4,322	14,984	329	1,412	875	249	22,171
Value of raw material worked up £	555,810	1,912,824	90,116	136,557	129,171	16,349	2,840,827
Total value of output £	1,195,195	3,374,749	176,622	292,967	219,807	35,059	5,294,399
Value added in process of manufacture .. .. £	635,063	1,446,941	86,177	154,998	89,761	18,461	2,431,401

(ii) *Development in Australia, 1922–23 to 1926–27.* The development of dressmaking and millinery establishments in Australia during the past four years is shown in the following table :—

DRESSMAKING AND MILLINERY ESTABLISHMENTS.—AUSTRALIA, 1922–23 TO 1926–27.

Items.	1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
Number of factories	922	926	922	898	912
Number of employees	16,213	15,623	14,823	14,703	15,051
Actual horse-power of engines used ..	693	701	699	854	906
Approximate value of land and buildings £	1,732,865	2,047,288	2,270,977	2,308,405	2,498,532
Approximate value of plant and machinery £	150,242	155,011	166,102	173,368	171,235
Total amount of wages paid .. £	1,435,885	1,448,046	1,383,138	1,462,410	1,507,373
Value of fuel used .. .. £	18,252	18,680	19,042	21,344	22,171
Value of raw material worked up £	2,514,140	2,658,051	2,648,815	2,805,062	2,840,827
Value of final output .. .. £	4,815,441	4,999,412	4,920,650	5,243,483	5,294,399
Value added in process of manufacture £	2,283,049	2,322,681	2,252,793	2,417,077	2,431,401

27. **Electrotyping, Stereotyping, Printing, and Binding Works.**—(i) *Details for each State, 1926–27.* Printing ranks high in importance among the industries of Australia. It affords employment for more than 27,000 employees, and pays nearly £6,000,000 in salaries and wages. During 1926–27 the total value of the output amounted to £16,000,811.

The following table gives particulars of these industries in each State for the year 1926–27 :—

ELECTROTYPING, STEREOTYPING, PRINTING, AND BINDING ESTABLISHMENTS, 1926–27.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories	497	482	129	94	84	21	1,307
Number of employees ..	10,225	9,304	3,607	1,857	1,381	685	27,059
Actual horse-power of engines employed	8,805	6,399	2,129	1,608	1,304	336	20,581
Approximate value of land and buildings .. .. £	3,185,802	2,140,620	747,050	482,216	362,481	94,730	7,012,899
Approximate value of plant and machinery .. £	2,989,806	2,223,455	575,257	330,952	321,918	121,224	6,562,612
Total amount of wages paid during year .. £	2,310,886	1,967,787	800,258	397,818	300,854	157,175	5,934,778
Value of fuel used .. £	81,076	56,943	29,872	13,763	10,638	5,356	197,648
Value of raw material worked up .. .. £	2,428,936	2,242,227	536,884	421,495	249,437	90,712	5,969,691
Total value of output £	6,428,247	5,512,524	1,855,168	1,051,553	840,368	312,951	16,000,811
Value added in process of manufacture .. £	3,918,235	3,213,354	1,288,412	616,295	580,293	216,883	9,833,472

(ii) *Development in Australia, 1922–23 to 1926–27.* The development of electrotyping stereotyping, printing, and binding in Australia since 1922–23 is shown in the following table :—

ELECTROTYPING, STEREOTYPING, PRINTING AND BINDING ESTABLISHMENTS.—AUSTRALIA, 1922–23 TO 1926–27.

Items.		1922–23.	1923–24.	1924–25.	1925–26.	1926–27.
Number of establishments		1,203	1,194	1,238	1,254	1,307
Number of employees		25,857	25,162	25,279	25,213	27,059
Actual horse-power of engines used ..		15,262	17,225	18,203	19,048	20,581
Approximate value of land and buildings	£	5,134,668	5,260,806	5,709.421	6,258,485	7,012.899
Approximate value of plant and machinery	£	4,613,369	5,132,411	5,624,487	5.961,076	6,562,612
Total amount of wages paid ..	£	5,182,861	5,253,593	5,232,040	5,526,681	5,934,778
Value of fuel used	£	146,889	148,927	165,046	185,513	197,648
Value of raw material worked up	£	5,658,994	4,879,459	4,904,536	5,277,369	5,969,691
Total value of output	£	15,382,659	14,577,413	13,621,903	14,493.764	16,000,811
Value added in process of manufacture	£	9,576,776	9,549,027	8,552,321	9,030,882	9,833,472

The figures shown in the above table for some years were considerably augmented by the inclusion of all details in respect of the newspapers industry, but from 1924–25 onwards only the cost of printing and publishing the papers has been taken into account in computing factory returns.

28. Motor and Cycle Works.—(i) *Motors and Motor Cycle and Bicycle Building and Repairing.* The industries catering for the motor trade comprise the principal branches of manufacture in Class XI. They have made rapid progress, and the statistical classification now separates the assembling and repairing of motors from the body building section. The returns for the former industry during the year 1926–27 are as follows :—

MOTORS AND MOTOR CYCLE, AND BICYCLE BUILDING AND REPAIRING, 1926-27.

Item.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories		803	599	80	122	88	62	1,754
Number of employees ..		6,228	3,939	759	1,527	823	463	13,739
Actual horse-power of engines employed		3,174	2,237	463	465	406	237	6,982
Approximate value of land and buildings ..	£	2,699,187	1,175,085	397,159	564,586	334.711	156.846	5.327.574
Approximate value of plant and machinery ..	£	507,409	299,580	68,051	110,759	61.334	26.855	1.073.988
Total amount of wages paid during year ..	£	1,056,651	675,674	144,453	250,578	151,414	71.742	2.350.512
Value of fuel used ..	£	50,992	31,771	7,409	10,227	5,009	2,499	107,907
Value of raw material worked up	£	625,411	96,977	102,094	210,963	77,031	29.685	1.142.161
Total value of output	£	2,361,546	1,129,733	346,132	591,961	310,479	141,631	4,881,782
Value added in process of manufacture	£	1,685,143	1,000,985	236,929	370,771	228,439	109,447	3,631,714

(ii) *Motor Body Building and Repairing.* Pending the manufacture of the complete motor car in Australia, special attention has been paid to the body building industry. This industry came into being during the war years, and assisted by a substantial tariff has grown apace with the development of motoring in this country. Approximately 90,000 bodies were manufactured during 1926–27, and the majority of cars now purchased is fitted with Australian bodies. Details of the factories engaging in this trade during 1926–27 are as follows :—

MOTOR BODY BUILDING AND REPAIRING, 1926–27.

Item.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Australia.
Number of factories	53	72	15	11	5	..	156
Number of employees ..	2,045	2,023	446	4,596	173	..	9,283
Actual horse-power of engines employed	1,409	962	193	3,011	46	..	5,621
Approximate value of land and buildings .. £	637,547	622,075	59,238	532,474	40,560	..	1,891,894
Approximate value of plant and machinery .. £	100,678	195,480	14,646	410,974	5,632	..	727,410
Total amount of wages paid during year .. £	435,006	469,467	84,350	955,658	32,938	..	1,977,419
Value of fuel used .. £	9,776	10,313	1,055	33,460	617	..	55,221
Value of raw material worked up .. .. £	458,762	655,674	87,875	1,806,040	42,368	..	3,050,719
Total value of output £	944,143	1,359,157	205,999	3,092,333	84,863	..	5,686,495
Value added in process of manufacture .. .. £	475,605	693,170	117,069	1,252,833	41,878	..	2,580,555

29. **Furniture and Cabinet Making and Billiard Table Making Factories.**—These industries constitute the principal manufactures in Class XIII. The following table gives particulars for each State :—

FURNITURE AND CABINET MAKING AND BILLIARD TABLE MAKING FACTORIES, 1926–27.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories	275	347	79	62	50	28	841
Number of employees ..	4,073	3,562	1,330	1,160	734	275	11,134
Actual horse-power of engines employed	4,272	3,581	1,291	1,852	774	401	12,171
Approximate value of land and buildings .. .. £	776,631	767,065	199,781	151,529	126,737	39,253	2,060,996
Approximate value of plant and machinery .. £	228,513	190,230	72,494	82,304	38,372	19,752	631,665
Total amount of wages paid during year .. .. £	826,733	639,051	268,768	208,187	131,276	40,667	2,114,682
Value of fuel used .. £	22,207	22,705	8,495	7,131	3,170	1,513	65,221
Value of raw material used £	1,168,043	815,015	301,629	237,214	179,127	27,179	2,728,207
Total value of output £	2,520,895	1,902,991	714,124	548,904	376,914	94,736	6,158,564
Value added in process of manufacture .. .. £	1,330,645	1,065,271	404,000	304,559	194,617	66,044	3,365,136

30. **Electric Light and Power Works.**—The increased demand for electrical energy has been responsible for considerable development in the electric light and power works of Australia during recent years. Since 1922–23 the production of electric light and power has increased from 984,688,314 to 1,987,550,648 British units, or by more than 101 per cent. Particulars for the years 1926–27 are as follows :—

ELECTRIC LIGHT AND POWER WORKS, 1926–27.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories	126	86	30	25	37	9	313
Number of employees.. ..	2,034	1,120	873	1,226	290	133	5,676
Actual horse-power of engines employed	271,289	219,626	69,235	94,253	33,075	71,195	758,673
Approximate value of land and buildings .. .. £	2,319,987	1,809,715	237,997	493,870	173,327	27,100	5,061,996
Approximate value of plant and machinery .. £	5,546,585	5,144,035	2,268,658	1,577,313	689,108	3,006,111	18,231,810
Total amount of wages paid during year .. £	614,886	322,214	326,575	350,559	73,423	33,789	1,721,446
Value of fuel used .. £	1,496,046	682,482	163,875	246,788	214,674	4,700	2,808,565
Total value of output £	4,271,646	1,768,514	931,263	1,026,332	491,393	227,570	8,716,718

31. Gas and Coke Works.—(i) *Details for each State, 1926–27.* Gas works are in operation in nearly all the chief towns in Australia. In New South Wales there are eleven and in Queensland two coke factories which are worked as separate industries. The subjoined table gives particulars of gas and coke works in each State for the year 1926–27 :—

GAS AND COKE WORKS, 1926–27.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of factories	59	34	18	8	5	2	126
Number of employees.. ..	2,465	1,115	745	749	89	114	5,277
Actual horse-power of engines employed	8,582	3,142	581	1,117	211	157	13,790
Approximate value of land and buildings .. .. £	1,121,482	570,485	232,703	26,160	(*a*)	(*a*)	*b*2,080,994
Approximate value of plant and machinery .. £	3,861,593	2,119,435	1,214,960	695,076	(*a*)	(*a*)	*b*8,215,312
Total amount of wages paid during year .. £	672,079	303,507	290,385	205,434	(*a*)	(*a*)	*b*1,524,596
Value of fuel used .. £	228,158	144,356	17,384	40,229	(*a*)	(*a*)	*b* 444,952
Value of raw material used £	2,043,471	1,458,765	192,107	249,270	(*a*)	(*a*)	*b*4,024,134
Total value of output £	4,268,066	2,701,048	544,795	672,609	(*a*)	(*a*)	*b*8,425,810
Value added in process of manufacture .. .. £	1,996,437	1,097,927	335,304	383,110	(*a*)	(*a*)	*b*3,956,724

(*a*) Information not available for publication. (*b*) Including Western Australia and Tasmania.

(ii) *Coal Used and Production, 1926–27.* The following table shows the quantity and value of the production of gas and coke works in each State during the year 1926–27 :—

GAS AND COKE WORKS.—COAL USED AND PRODUCTION, 1926–27.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
COAL USED.							
Coal .. .. tons	1,681,008	442,391	108,460	100,418	(*a*)	(*a*)	*b* 2,363,755
PRODUCTS.							
Gas .. 1,000 cubic feet	10,279,605	5,855,817	1,385,030	1,465,490	(*a*)	(*a*)	*b*19,478,569
Coke .. .. tons	1,086,604	283,998	62,864	64,655	(*a*)	(*a*)	*b* 1,512,540
VALUE.							
Gas .. .. £	2,113,511	1,298,984	541,749	480,251	(*a*)	(*a*)	*b* 4,626,218
Coke .. .. £	1,604,966	458,717	56,805	114,214	(*a*)	(*a*)	*b* 2,265,657

(*a*) Not available for publication. (*b*) Including Western Australia and Tasmania.

In order to cope with the general industrial expansion, the production of gas increased from 17,005,977 cubic feet in 1922–23 to 19,478,569 cubic feet in 1926–27, while the output of coke rose from 1,104,639 to 1,512,540 tons during the same period.

CHAPTER XXIII.

WATER CONSERVATION AND IRRIGATION.

§ 1. Artesian Water.

1. **General.**—In every country in which droughts are recurrent, there are few problems the solution of which is of greater importance than that of an adequate system of water conservation. Much has been done in Australia so far as the supply of water to centres of population is concerned, and a description of several of the metropolitan water-works will be found in the chapter dealing with Local Government. Interstate Conferences on artesian water were held in 1912, 1914, 1921, and 1924, when combined Governmental action was agreed upon with reference to delimitation of the artesian basins, hydrographic surveys, analyses and utilization of artesian water, etc. (See map on page 859.)

2. **The Great Australian Artesian Basin.**—In speaking of the "Great Australian Artesian Basin," the area is understood which includes (*a*) considerably more than one-half of Queensland, taking in practically all that State lying west of the Great Dividing Range, with the exception of an area in the north-west contiguous to the Northern Territory; (*b*) a considerable strip of New South Wales along its northern boundary and west of the Great Dividing Range; and (*c*) the north-eastern part of South Australia proper, together with the extreme south-eastern corner of the Northern Territory. This basin (shown approximately by the map on page 859) is said to be the largest yet discovered, and measures about 600,000 square miles, of which 376,000 square miles are in Queensland, 118,000 square miles in South Australia, 80,000 square miles in New South Wales, and 25,000 square miles in the Northern Territory. The area of the intake beds is estimated at 60,010 square miles, viz., 50,000 square miles in Queensland and 10,010 square miles in New South Wales. A description of the basin and its geological formation will be found in previous issues of the Year Book (see No. 6, p. 569).

3. **The Western Australian Basins.**—The Western Australian Basins fall naturally within five distinct groups, viz., the Eucla Basin, in the extreme south-east of the State, extending well into South Australia along the shores of the Great Australian Bight; the Coastal Plain Basin, west of the Darling Range; the North-West Basin, between the Murchison and Ashburton Rivers; the Gulf Basin, between Cambridge Gulf and Queen's Channel; and the Desert Basin, between the De Grey and Fitzroy Rivers.

The Recent and Tertiary strata which enter Western Australia at its eastern border, and which have a prevailing dip towards the Great Australian Bight, form the Eucla artesian water area. Where boring operations have been undertaken, the water has been found to be salt or brackish, and there are other conditions affecting the supply, such as local variations in the thickness of the beds, their relative porosity, and the unevenness of the floor upon which they rest, which, so far, have not been examined with sufficient thoroughness to enable many particulars to be given in regard to this basin.

In the Coastal Plain Basin to the west of the Darling Ranges artesian boring has, on the other hand, been carried on successfully for many years.

4. **The Murray River Basin.**—The Murray River basin extends over south-western New South Wales, north-western Victoria, and south-eastern South Australia. It is bounded on the west by the azoic and palæozoic rocks of the Mount Lofty and other ranges extending northwards from near the mouth of the Murray to the Barrier Range, and on the east and north-east by the ranges of Victoria and New South Wales. This tertiary water-basin is occupied by a succession of sedimentary formations, both porous and impervious. It is of interest to note that the waters of the Murray River are partly

supplied by influx from the water-bearing beds of this basin; this is proved by the fact that, at low water, springs are observed at certain places flowing into it from beneath the limestone cliffs from Pyap Bend downwards. Similar springs exist along the courses of other branches of the River Murray system, where they cut through the tertiary formation. On the Victorian side bores have been put down, and water has been struck at various levels.

5. **Plutonic or Meteoric Waters.**—In previous Year Books will be found a statement of the theory of Professor Gregory* as to the origin of the water in the Australian artesian basins together with the objections held thereto by a former Government Geologist of New South Wales.† (See Official Year Book No. 6, p. 570.)

6. **Artesian and Sub-Artesian Bores.**—(i) *General.* The following table gives particulars of artesian and sub-artesian bores in each State and in the Northern Territory :—

ARTESIAN AND SUB-ARTESIAN BORES, 1926–27.

Particulars.	N.S.W.	Vic.	Q'land. (*f*)	S. Aust. (*c*)	W. Aust.	N. Ter.	Total.
Bores existing .. No.	527	374	3,138	144	231	181	4,595
Total depth of existing bores feet	887,205	99,700	*d*3,828,924	112,812	214,740	58,829	5,202,210
Daily flow 1,000 gals.	*a*80,285	*b*	*a*291,622	*a*12,972	67,380	7,462	*e*459,721
Depth at which artesian water was struck—							
Maximum .. feet	4,338	700	7,009	4,850	3,325	1,760	7,009
Minimum .. feet	89	150	10	55	39	42	10
Temperature of flow—							
Maximum .. °Fahr.	140	*b*	212	208	140	*b*	212
Minimum .. °Fahr.	72	*b*	78	82	75	*b*	72

(*a*) Flowing bores only. (*b*) Not available. (*c*) Government bores only. (*d*) Total depth of all bores. (*e*) Incomplete. (*f*) 1925–26 figures.

(ii) *New South Wales.—(a) Artesian Water Supply.* The New South Wales portion of the great Australian basin, comprising approximately 80,000 square miles, is situated in the north-western portion of the State. Artesian boring in New South Wales dates from 1879, when a private bore was put down on the Kallara pastoral holding, between Bourke and Wilcannia. The first Government bore was that at Goonery, on the Bourke-Wanaaring road, completed in 1884.

The following statement shows the extent of the work successfully carried out by the Government and by private owners up to 30th June, 1927 :—

EXISTING ARTESIAN BORES.—NEW SOUTH WALES, 1927.

Bores.	Flowing.	Pumping.	Total.	Total Depth.
				feet
For Public Watering-places, Artesian Wells, etc.	134	37	171	356,979
For Country Towns Water Supply ..	3	1	4	6,533
For Improvement Leases	20	6	26	38,621
Total Government Bores ..	157	44	201	402,133
Private Bores	230	96	326	485,072

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* See *J. W. Gregory, F.R.S., D.Sc.*: "The Dead Heart of Australia," London, John Murray, 1906; and "The Flowing Wells of Central Australia," Geogr. Journ., July and August, 1911.

† *E. F. Pittman, A.R.S.M., formerly Government Geologist of New South Wales*: "Problems of the Artesian Water Supply of Australia, with special reference to Professor Gregory's Theory." (Clarke Memorial Lecture, delivered before the Royal Society of New South Wales, 31st October, 1907); "The Great Australian Artesian Basin," Sydney, 1914; and "The Composition and Porosity of the Intake Beds of the Great Australian Artesian Basin," Sydney, 1915.

The average depth is 2,001 feet in the case of Government bores, and of private bores 1,488 feet, and it ranges from 89 to 4,338 feet. The two deepest wells in New South Wales are those at Boronga, in the County of Stapylton, with a depth of 4,338 feet and a present daily outflow of 825,410 gallons; and at Dolgelly, also in County Stapylton, with a depth of 4,086 feet, and a present discharge of 464,390 gallons per day. The largest flow at the present time is that at the Angledool No. 2 bore, in the County of Finch, which yields 1,330,285 gallons a day, and has a depth of 3,479 feet.

Of the 576 bores which have been sunk, 387 are flowing, and give an aggregate discharge of 80,285,457 gallons per day; 140 bores give a pumping supply, the balance of 49 being failures; the total depth bored represents 949,553 feet.

The flow from 91 bores is utilized for supplying water for stock on holdings served in connexion with Bore Water Trusts or Artesian Districts under the Water Act of 1912. The total flow from these bores amounts to 34,015,591 gallons per day, watering an area of 4,870,892 acres by means of 3,080 miles of distributing channels. The average rating by the Bore Trusts to repay the capital cost with interest is 2.06d. per acre, including the cost of maintenance and administration.

In the majority of cases the remaining bores are used by pastoralists for stock watering purposes only, but in a few instances the supply is utilized in connexion with country towns.

The watering of the north-western country by means of bore water has largely increased the carrying capacity of the land; and, what is of perhaps greater importance, it has made comparatively small pastoral holdings practicable in country previously confined almost entirely to the operations of companies holding immense areas.

It having been determined that multiplicity of bores is the chief factor governing the annual decrease in bore flows, and that limiting the discharge from a bore will prolong its flowing life, action has been taken to prevent any waste by controlling the bore flow to actual requirements. It is confidently anticipated that this action will materially reduce the rate of decrease in the future.

(b) *Private Artesian Bores.* Much has been done in the way of artesian boring by private enterprise. As far as can be ascertained, 351 private bores have been undertaken in New South Wales, of which 25 were failures. The yield of the flowing bores is estimated at 38 million gallons per day. No data are available regarding the pumping bores.

(c) *Shallow Boring.* The scheme described in Official Year Book No. 9 (p. 520) for assisting settlers by sinking shallow bores has met with considerable success.

Operations commenced with one plant only, but the number has been increased gradually until 36 plants are at work.

A large number of applications from settlers wishing to take advantage of the liberal conditions offered under the regulations has been received, and further applications are coming to hand daily, consequently the plants now in use will probably be insufficient to cope with the demand. Out of 2,109 bores put in hand up to 30th June, 1927, 370 have proved failures.

There can be no question that the added value of the holdings represented by the bores already put down is considerably in excess of their cost, and as fairly conclusive evidence of this, it might be stated that in several instances the Government Savings Bank has, on completion of a bore, made the settler a sufficient advance to enable him to pay the total cost in cash.

In addition to the work carried out under the Shallow Boring Regulations outlined above, shallow boring plants have sunk 22 bores in the Pilliga scrub and on Crown lands for the Lands and Forestry Departments.

The fact that of the bores put down in the Pilliga scrub, 61 are giving a flowing supply, adds much to their value, and is of special interest as indicating the possibility of tapping a small and hitherto unknown artesian basin.

(*d*) *Shallow Boring by Privately-owned Plants.* In addition to the abovementioned scheme, regulations have been gazetted providing for the sinking of shallow bores for settlers by privately-owned plants. Under these regulations, upon a settler submitting an application accompanied by a tender from a contractor for the sinking of a bore, agreements are entered into—

(*a*) with the contractor under a standard specification in which the proper construction of the bore is provided for, and it is also stipulated that no payment shall be made unless a supply of serviceable water of at least 100 gallons per hour is obtained;

(*b*) with the settler that he shall pay the ascertained cost as set out in certificate under extended terms of repayment, with interest.

Under this scheme up to June, 1927, fifteen bores, to a depth of 7,375 feet, had been completed.

(iii) *Victoria.* Victoria lies altogether outside the Great Australian Artesian Basin, and as water in generally available from surface or shallow underground supplies, there has not been much occasion for artesian boring. As early as 1880, however, an artesian well was bored at Sale, which gave a large supply of water of fair quality before it failed through corrosion of the casing. In 1905 a new bore was put down, which at a depth of 277 feet yielded sufficient water to fill Lake Guthridge, a local depression. As the water was, however, impure, and contained an excess of sulphuretted hydrogen, boring operations were continued to 520 feet, when the lowering of the casing shut off the supply of water. A further bore was then put down at some distance from the first, and this, at a depth of 238 feet, yielded a fresh and clear water supply of about 145,000 gallons per day. Corrosion troubles occurred here also, and at the end of 1912 another bore was put down to a depth of 235 feet, artesian flows being struck at 187 feet and 235 feet. Towards the end of 1915 a flow of 200,000 gallons per day was struck at a depth of 125 feet on the Powerscourt Estate, near Maffra. Other bores are being put down in the locality.

Largely due to the failure of surface supplies in the drought of 1878 to 1886, no less than 499 bores were, before the end of 1888, put down by shire councils aided by the Government. The total depth bored was 40,000 feet; fresh water was struck in 78 instances; 47 yielded brackish but usable water; 229 were salt, while the balance were dry. The bores covered practically the whole of the settled portions of Northern and North-western Victoria and parts of Gippsland.

In the late eighties a number of bores was put down in the north-western part of the State, varying from 200 to over 2,000 feet in depth, but without any notable success. In 1897 a Board reported on boring for artesian water supply in the Mallee country, but this report was adverse, except as regards the extreme northern portion thereof. In 1906 eight bores were put down on the Overnewton Estate, Maribyrnong, to depths varying from 147 to 272 feet; small supplies of good and medium water for stock purposes were obtained, but only one of the wells yielded water fit for domestic purposes. In 1908 boring was commenced in the Mallee country near the border east of Pinnaroo in South Australia, and a line of bores from the Border to Kow Plains has proved the existence of a large sheet of underground water. Altogether, 98 bores have been successful in striking fresh water, and their depths vary from 155 to 752 feet, the water rising to within from 207 to 6 feet of the surface. In three instances the bores flow, the water rising from 4 to 17 feet above the surface. The fresh water extends nearly as far east as the 142nd meridian, and its northern limit is approximately the 35th parallel.

At the 30th June, 1927, the number of existing bores in use in the north-western portion of Victoria (Mallee) was 374, from which supplies are obtained by pumping. The total depth bored amounted to 99,700 feet, while the maximum and minimum depths at which water was struck were 700 and 150 feet respectively. The figures include about 275 existing private bores, with a total depth of about 53,600 feet.

(iv) *Queensland.* A return relating to the 30th June, 1926, classifies the Queensland artesian bores under the following headings :—

ARTESIAN BORES.—QUEENSLAND, 30th JUNE, 1926.

Sunk by—	Artesian Flows.	Sub-Artesian or Pumped Supplies.	In Progress, Abandoned, or Uncertain.	Total.
Government	79	133	161	373
Local governing authorities	19	22	25	66
Private owners	1,264	1,621	1,000	3,885
Total	1,362	1,776	1,186	4,324

The estimated yield of water from 1,362 flowing bores on 30th June, 1926, was 291,621,910 gallons per diem. The deepest well was about 40 miles west of Blackall, lying east of the Barcoo River; this had a depth of 7,009 feet, and was stated to yield 70,000 gallons daily. The flow is, of course, a comparatively small one, many wells yielding, when uncontrolled, from one to three million gallons a day. The waters of many of the wells have been analysed, and some found suitable for wool-scouring only, others are suitable for watering stock but not for irrigation, owing to the presence of alkali; others again serve for both stock and irrigation, while some, such as those containing sulphuretted hydrogen, are not of any use. Water fit for stock may generally be said to be "safe" for domestic purposes in spite of its slightly mineral taste. The wells yielding the mineral waters known as "Helidon Spa," "Boonah Spa," and "Junot Spa," which are much in use in Queensland and New South Wales, are shallow wells from 60 to 200 feet in depth.

Of the 4,324 bores in Queensland, 439 have been put down by the State Government or Local Authorities, while 3,885 have been sunk by private enterprise; 1,362 bores are flowing, and 1,776 give a pumping supply; the balance of 1,186 are either in progress of construction, abandoned, or uncertain. The total depth bored is 3,828,924 feet. The minimum and maximum depths at which artesian water was struck are 10 feet and 7,009 feet respectively, while the temperature of the flow ranged from 78 to 212 degrees Fahr.

Fifty-two Bore Water Supply Areas were completed on 30th June, 1926, comprising a total of 4,696,924 acres within the gazetted areas, over which water was distributed in 1,939 miles of drains. Five additional Bore Water Supply Areas were in hand on 30th June, 1926, comprising an area of 611,791 acres, and 361 miles of drains.

(v) *South Australia.*—(*a*) *General.* There were in South Australia 144 Government bores existing at 30th June, 1927, of which 36 were artesian and 108 sub-artesian. Of these, 106 were under 1,000 feet in depth; 23 from 1,000 to 2,000 feet; 7 from 2,000 to 3,000 feet; 5 from 3,000 to 4,000 feet; and 3 over 4,000 feet. The deepest flowing bore was at Patchawarra, on the Farina to Haddon via Innamincka route, measuring 5,458 feet, but now yielding only 50 gallons per day. The maximum flow, viz., 1,250,000 gallons, is obtained at Coonie Creek, east of Lake Frome.

The following table gives particulars as to South Australian bores at 30th June, 1927 :—

ARTESIAN BORES. (a)—SOUTH AUSTRALIA, 1927.

Particulars.		Artesian and Sub-artesian.
Bores sunk during 1926–27	No.	..
Bores existing	No.	144
Total depth of existing bores	feet	112,812
Daily flow	,000 gallons	(b) 12,972
Depth at which water was struck—		
Maximum	feet	4,850
Minimum	feet	55
Temperature of flow—		
Maximum	°Fahr.	208
Minimum	°Fahr.	82
Total cost of construction of existing bores up to 30th June, 1927	£	324,199
Expenditure during year on boring operations	£	..

(a) Government bores only. (b) Flowing bores only.

Of the above-mentioned bores, 46 are situated within the Great Artesian Basin, and the remainder are in the Lower Murray and other local basins.

(b) *Bores between the Murray and the Eastern Boundary of the State.* The sinking of bores across the Ninety-mile Desert between the Murray and the Victorian boundary was commenced in 1886 at Coonalpyn; with the exception, however, of salt water at 55 feet, no success was met with. Ki Ki bore was sunk in 1887, and at 361 feet a good supply of water fit for stock was struck. Tintinarra bore was sunk in 1887; it was artesian when first tapped. The water was found to be fit for locomotive engines and is still used for that purpose. The bore at Emu Flat was also sunk in 1887. In 1904, a bore was sunk at Cotton, and numerous successful bores have since been put down by the Public Works Department, and subsequently by residents of the district. The water rises to a distance from the surface of from 15 to 320 feet, and the maximum quantity obtained per diem is 144,000 gallons at the Pinnaroo No. 2 bore. Several wells, ranging in depth from 55 to 221 feet, have also been sunk in this district. The latest Government bores are Pata bore in the Hundred of Pyap, and Beulah bore in the Hundred of Wilson, at both of which large supplies of water containing ¾ oz. of solids per gallon were obtained.

(c) *Bores West of Oodnadatta.* A series of bores has been sunk, beginning with Breaden bore, 20 miles west of Oodnadatta, which was put down in 1911. The others since put down in this district are at Gypsum, Imbitcha, Mirackina, Raspberry Creek, Appreetinna, Wintinna, and Marla. Of these, the only artesian supply is at Raspberry Creek, where 1,000,000 gallons per day of good water are obtained. The depths of these bores range from 280 feet at Mirackina to 1,122 feet at Breaden, and the water from all of them is good. Warranarrea bore, situated 72 miles west of Oodnadatta on Pastoral Lease No. 1297 has been completed to a depth of 466 feet, a large supply of good water being obtained.

(d) *Eyre Peninsula.* From time to time bores have been sunk on Eyre Peninsula, but with little success. In some instances, stock water (1½ oz. salt to the gallon) was obtained, but this occurred only on the Nullarbor plains. In all other cases the water struck was too salt to be used. Consequently the supply of water is now principally from catchments, and a number of reservoirs has been constructed to hold from 1,000,000 to 18,500,000 gallons each, while many underground tanks have been built to contain from 40,000 up to 500,000 gallons each.

(e) *Bores sunk during the Year.* A bore has been put down at Pinnaroo for the Hydraulic Engineer's Department, and completed to a depth of 605 feet, from which a supply of 6,000 gallons of excellent water per hour was obtained. Boring operations were also carried out at Andado Station, 35 miles north-east of Charlotte Waters on behalf of the Commonwealth Government. Further boring has been carried out during the year by the Land and Survey Department with the object of ascertaining whether useful supplies of underground water are available in the north-western portion of the State, which is at present unsuitable for pastoral occupation.

(vi) *Western Australia.*—(*a*) *General.* The work by which the Government of Western Australia provides a permanent supply of water to Kalgoorlie, Boulder, and adjacent districts on the eastern goldfields comes properly under the heading of "Water Supply Works." A description of this undertaking is fully given in previous issues of the Official Year Book. (See Official Year Book No. 6, p. 576.)

Statistics in connexion with the Goldfields Water Supply undertaking and the Mines Water Supplies will be found in the chapter of this book dealing with *Local Government*.

The following table gives particulars regarding Western Australian artesian bores at 30th June, 1927:—

EXISTING ARTESIAN BORES.—WESTERN AUSTRALIA, 30th JUNE, 1927.

Particulars.		State.	Private.	Total.
Bores sunk during year	No.	..	1	1
Bores existing	No.	112	119	231
Total depth of existing bores	feet	95,834	118,906	214,740
Daily flow	gallons	27,458,700	39,921,180	67,379,880
Depth at which artesian water was struck—				
Maximum	feet	2,527	3,325	3,325
Minimum	feet	39	70	39
Temperature of flow—				
Maximum	°Fahr.	140	128	140
Minimum	°Fahr.	76	75	75

To 30th June, 1927, the total number of Government bores was 112, while there were, in addition, approximately 119 private bores recorded, making a total of 231 bores, distributed as follows:—Kimberley Division 11, North-West Division 102, Metropolitan Division 48, South-West Division 45, and Eucla Division 25.

(*b*) *The Coastal Plain Basin or Perth Area*, which, generally speaking, extends from Cape Leeuwin to Dongarra, and from which the Metropolitan Water Supply is largely drawn, yields a supply of water mostly fresh and suitable for domestic purposes, though towards the north it becomes brackish and only suitable for stock.

There are 48 bores in the Metropolitan area, several of which have been put down to augment the hills supply and the domestic supply of the suburbs, and Fremantle is largely dependent upon this source.

(*c*) *The North-west Basin or Carnarvon Area* may be said to extend from Gantheaume Bay in the south to Onslow in the north, and embraces a very large tract of ideal sheep country.

Many private bores have been put down on sites which permit of the gravitation of the water for miles, and, by this means, a very considerable area has been made available for stock-raising. In all, about 102 bores have been put down.

(*d*) *The Desert Basin or Broome Area.* So far very little development work has been done. Artesian bores have been put down in the town site, and the domestic requirements of the town are entirely supplied from this source. The area extends from Condon in the south-west to the Meda River beyond Derby in the north, and for a considerable distance inland. So far about 11 bores have been sunk, 3 being at Broome, 2 at Derby, and 3 on the telegraph line on the road between Derby and Hall's Creek, about 12, 67, and 80 miles inland.

(e) *Eucla Area.* This area extends from Eucla, on the South Australian border, to west of Israelite Bay. So far, beyond the bores put down on the route of the Trans-Australian Railway, very little has been done in proving the resources of this area. In 1902 the first bore was sunk, about 35 miles north of Madura, and sub-artesian water was struck at 430 feet, at an elevation of 400 feet above sea level. Following upon this, a deep bore was put down at Madura, below the cliff and nearer the coast, when an artesian supply of stock water was obtained at a depth of 2,041 feet, yielding 5,700 gallons per day. Later, about 23 bores were sunk along the survey line of the railway, which runs east and west about 90 miles inland. These bores were put in at intervals between the 205 mile peg and the South Australian border, and ranged in depth between 323 and 1,344 feet. In most instances only stock water was struck at depths varying between 300 and 1,300 feet, and the largest supply was estimated at about 10,000 gallons per day.

(vii) *Northern Territory.* In the Northern Territory, bores to the number of 181 were put down up to 30th June, 1927, which number does not include bores put down by hand-boring plants for test purposes. One bore is artesian, and the others give a pumping supply, the daily flow at the end of the year being 7,462,120 gallons. The total depth bored in State and private bores was 58,829 feet, and the maximum and minimum depths were 1,760 and 42 feet respectively.

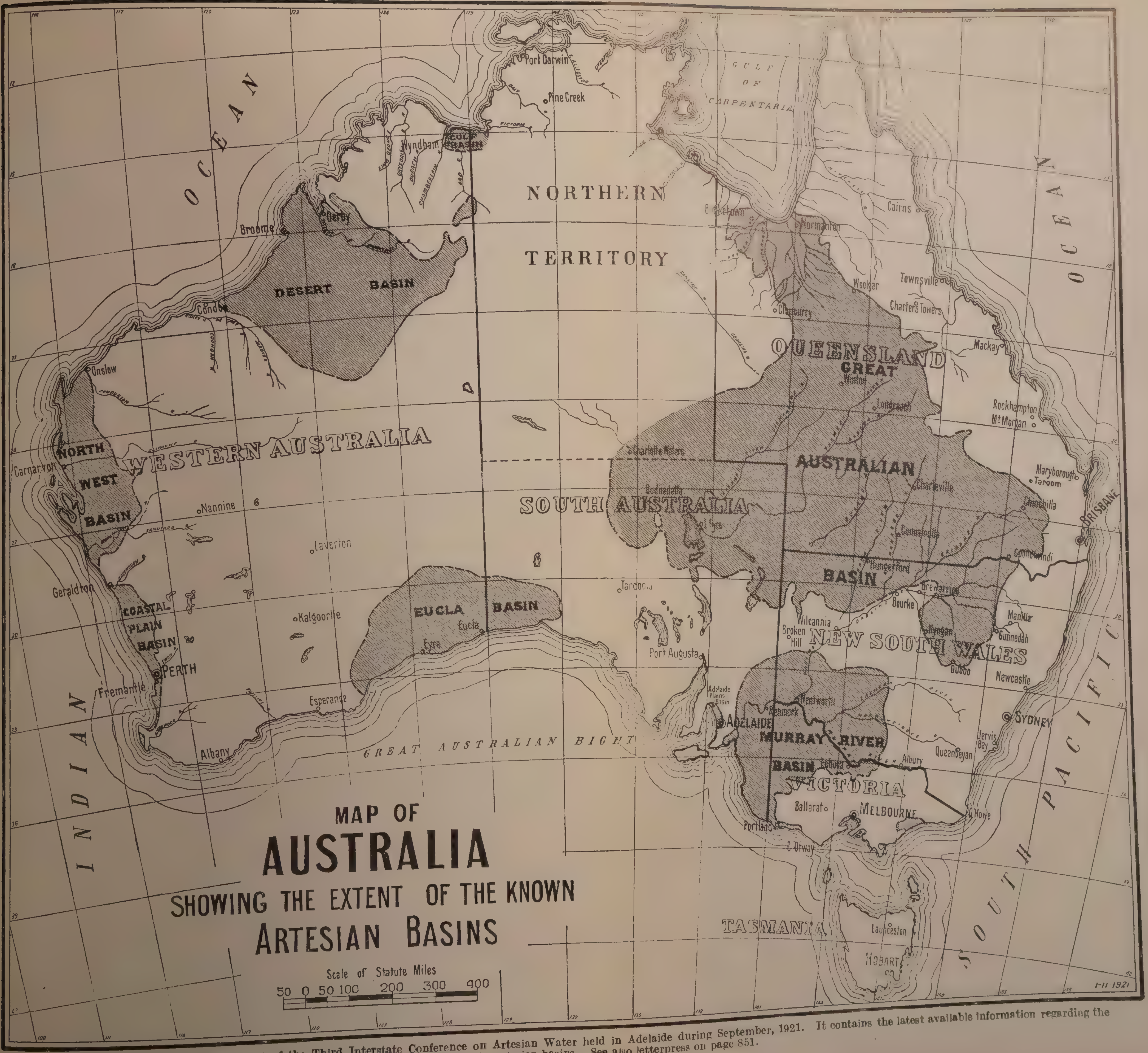
§ 2. Irrigation.

1. **General.**—Australia's first experiments in irrigation were made with the object of bringing under cultivation areas in which an inadequate rainfall rendered agricultural and even pastoral occupations precarious and intermittent, and, although these original settlements have generally proved fairly successful, most of the States, instead of promoting new settlement in unoccupied regions, are adopting the policy of making existing settlements closer, by repurchasing large estates, subdividing them into holdings of suitable sizes for cultivation, and selling the land upon easy terms of payment. It is in connexion with this Closer Settlement policy that the special value of irrigation is recognized.

2. **New South Wales.**—(i) *General.* The recognition of the fact that the area suitable for cultivation might be extended largely by a system of water conservation and irrigation has induced the Government to undertake various detached works and schemes, which will constitute portion of the system necessary to serve the whole State.

The system, and the works necessary to its maintenance and development within the State of New South Wales, are under the control of the Water Conservation and Irrigation Commission, which consists of the Minister for Agriculture for the time being as Chairman, and two other Commissioners. The works controlled by the Commission include the great Murrumbidgee Irrigation Scheme; the smaller irrigation settlements at Hay, Curlwaa (Wentworth) and Coomealla; national works of water conservation; shallow boring for settlers; and water trusts and artesian bore trusts operating under the Water Act of 1912. The Commission has control also of storage and diversions of water by private persons for purposes of conservation and irrigation.

(ii) *Murrumbidgee Irrigation Scheme.* The main features of the scheme include a storage dam across the Murrumbidgee at Burrinjuck to retain the floodwaters, which are released for use lower down the river during the dry summer months; a movable diversion weir at Berembed, about 240 miles below the dam, to turn the required amount of water from the river into the main canal; a main canal, leaving the river near the weir; four main branch canals and a series of subsidiary canals and distributing channels through the area to be irrigated; bridges, checks, regulators and other structures throughout the entire system, and meters for measuring the volume allowed to each farm. Towns and villages, roadways to serve each farm, and a general surface drainage system, are also included in this scheme.



This map was included in the Report of the Third Interstate Conference on Artesian Water held in Adelaide during September, 1921. It contains the latest available information regarding the extent of the artesian basins. See also letterpress on page 851.

Further details in respect of the storage dam, diversion weir and canals, together with the areas thrown open for settlement are contained in previous issues of the Official Year Book. (See Official Year Book No. 15, page 442.)

Particulars in respect of tenure are set out in Chapter V., Land Tenure and Settlement.

The irrigation area is situated on the northern side of the Murrumbidgee River, where it is anticipated that there will ultimately be upwards of 200,000 acres under irrigation in blocks devoted to fruit, vegetable and rice growing, dairying, stock-raising, etc. With the aid of irrigation, the soil and climate of these areas are suitable for the production of apricots, peaches, nectarines, prunes, pears, plums, almonds, melons, cantaloups, and citrus fruits, also wine and table grapes, raisins, sultanas, figs, olives, peanuts, and most varieties of vegetable and fodder crops. Dairying and pig-raising are being undertaken by a large number of settlers in the areas, and the canning and drying of fruit and the production of wine are industries of considerable dimensions. The district is one of the greatest fresh fruit producing centres in the State. The growing of rice on this area promises to develop into an important industry. Rice from an area of about 5,000 acres was harvested in 1927, and it is estimated that more than twice that area was harvested in 1928.

The Department of Agriculture, which controls the Yanco Experimental Farm, has established at Griffith (Mirrool irrigation area), a viticultural nursery for the propagation of vines.

On the 30th June, 1927, 1,937 farms were held, representing a total area of 117,539 acres. The number of town blocks held was 883.

In the matter of cultivation, the following particulars indicate the extent of the work performed by the settlers :—There are approximately 7,937 acres under deciduous fruits, 5,393 under citrus fruits, 5,810 under vines, and for the 1928 harvest about 12,000 acres under rice. The estimated population of the area is about 15,000.

The total production of the Murrumbidgee Irrigation areas for the year ended 30th June, 1927, is valued at £884,000.

(iii) *Curlwaa Irrigation Area.* The Curlwaa irrigation area is situated on the Murray River near its junction with the Darling River, and comprises 10,550 acres, of which on 30th June, 1927, irrigable holdings consisting of 1,939 acres had been taken up in areas of 1½ to 40 acres, with a leasehold tenure of 30 years, at rentals of from 3s. to 10s. per acre per annum for the most part, and up to 35s. per acre in some blocks set apart during recent years. Of the balance, 7,572 acres were leased as non-irrigable holdings for short terms, in the majority of cases up to five years, with rentals of from 5d. to 5s. per acre, while the remainder of the area, with the exception of a few vacant holdings, is made up of roads, channels, and other reserves. Of the irrigable area, 1,274 acres are planted as orchards and vineyards, of which 1,068 acres are in full bearing. There is also a small area under lucerne. It has been proved that the Curlwaa soil is eminently suited to the growth of citrus and other kinds of fruit, and some of the finest oranges grown in New South Wales are produced on this area.

The estimated weight of dried fruits produced on the Curlwaa area in the year 1926–27 was 809 tons, while the production of citrus fruit was 29,395 cases. The total value of production for the year is estimated approximately as follows :—Dried fruits, £62,464 ; citrus fruits, £17,793 ; other fresh fruit, £1,813 ; other produce and live stock, etc., £4,330 ; a total of £86,400. A considerable quantity of fresh fruit, comprising apples, pears, peaches, grapes, nectarines, and apricots was transported by motor for sale in Broken Hill.

Water is pumped from the Murray River by a suction gas plant in 3 units, with a total capacity of 12,500 gallons per minute and a lift of about 36 feet, and is supplied to the lessees at a flat rate of 20s. per acre per annum. There is also a general rate of 14s. per acre per annum upon the portion of the irrigated area in productive bearing. During the season 1926–27 the quantity of water supplied was 231,634,304 cubic feet, or 5,317 acre-feet, the average area watered during six irrigations being 1,548 acres. Each lessee is entitled to receive a quantity of water equivalent to a depth of 30 inches per annum.

(iv) *Hay Irrigation Area.* The Hay irrigation area consists of about 4,500 acres, of which on 30th June, 1927, the area held and used for irrigation purposes was 1,035 acres, in 107 blocks of from 3 to 30 acres. The term of lease is generally 30 years, and the annual rental from 5s. to 12s. per acre. In addition, there was at that date an area of 2,884 acres of non-irrigated land taken up in 52 blocks for short terms up to five years, with rentals of from 1s. to 10s. per acre. Water is lifted from the Murrumbidgee River by suction gas-driven pumping machinery in 2 units, with a total capacity of 4,000 gallons per minute, and a maximum lift of 30 feet. The rate charged to settlers is £1 10s. per acre per annum, but no general rate is levied as at Curlwaa. During the 1926–27 season 187,581,858 cubic feet of water were pumped with nine pumpings. The principal industry is dairying, milk being supplied to the town of Hay, and cream to the local butter factory.

(v) *Coomealla Irrigation Area.* The Coomealla Irrigation Area is situated on the Murray River about 9 miles by road from Wentworth. The land is rich chocolate loam, timbered with pine, belah, and sandalwood, and has a limestone subsoil varying from 2 feet to 10 feet below the surface. The soil is admirably suited to horticultural farming, especially viticulture. The first section at present being developed embraces 3,090 acres, of which 2,314 acres have been subdivided into 42 residential holdings and 124 horticultural farms, the average area of the latter being 17.7 acres, of which 15.9 acres are irrigable. The tenure is either perpetual leasehold or farm purchase, at the option of the settler, with a payment period of 36½ years. Water is pumped from the Murray River by steam-driven engines, operating two-stage centrifugal pumps, in duplicate, with a total capacity of 38 cubic feet per second. The rising main is of steel, 2,150 feet long, 5 ft. 6 in. diameter, and is of sufficient capacity to permit of an extension of the area later. The supply channels have been lined throughout with concrete and mortar, and the scheme also includes the construction of drainage channels, bridges, and other structures.

At 30th June, 1927, 80 holdings were held as leases or purchases, 71 being horticultural and 9 residential holdings. The total area of these is 1,361½ acres, of which 492 acres had been planted, principally to sultanas and citrus.

(vi) *Projected Irrigation Schemes.* (*a*) *General.* The Water Conservation and Irrigation Commission is investigating schemes for utilizing the New South Wales share of the Murray waters, and for storing water for the purpose of irrigation and stock and domestic supply on the Lachlan, Macquarie, Hunter, Namoi and Peel Rivers.

(*b*) *Murray River.* The effect of constructing the Upper Murray storage will be to ensure at all times sufficient flow below Albury to permit of diversions for irrigation and stock and domestic supplies, and to make good the losses in the river due to seepage, evaporation, and lockages. The Act provides that, subject to certain conditions, New South Wales and Victoria shall share the regulated flow of the river at Albury, and shall each have the full use of all tributaries of the River Murray within its territory below Albury, with the right to divert, store, and use the flows thereof.

It is estimated that the New South Wales regulated river flow after the construction of the Upper Murray storage will amount to at least 132,500 acre-feet per month at Albury during the irrigating season, and this will permit of a considerable amount of irrigation development along the river.

An investigation is being made into the manner in which the New South Wales proportion of the Murray waters can be most profitably applied, but no conclusion has yet been reached.

(*c*) *Lachlan River.* In December, 1926, the Parliamentary Standing Committee on Public Works completed its inquiry into alternative schemes for water conservation on the Lachlan River. These comprised: (1) construction of a large storage dam at Wyangala, (2) the raising of Lake Cudgellico, and (3) a number of low weirs between Goolagong and Booligal. The Committee recommended the construction of the Wyangala Dam, subject to some 850,000 acres of mallee country along the Condobolin–Broken Hill railway line between Euabalong and Roto being thrown open for settlement. It is proposed to serve this area with stock and domestic water, which will be diverted from the Lachlan River at the Booberoi Weir and conveyed in channels to the area. The Wyangala Dam will have a capacity of 273,694 acre-feet, and is estimated to cost £1,352,000.

(*d*) *Macquarie River.* The question of construction of a storage dam at Burrendong, together with a diversion weir in the vicinity of Narromine, and a canal therefrom to serve an irrigation area between Narromine and Trangie was also inquired into by the Parliamentary Standing Committee on Public Works, but the inquiry was not completed at the expiration of Parliament, and the Committee's report has not yet been presented.

(*e*) *Hunter, Namoi, and Peel Rivers.* Pumping by licensed private irrigators under the Water Act of 1912 is increasing at such a rapid rate that in the case of some of the rivers, such as the Peel and the Hunter, it will not be possible adequately to supply the pumps in dry seasons until head storage works have been constructed. Investigations are in progress for storage dams on the Hunter and Peel Rivers, for dams on the Namoi River above Manilla, and lower down above the junction of the Peel River at alternate sites.

(vii) *Water Rights.* By Part II. of the Water Act 1912, the right to the use and flow and to the control of the water in all rivers and lakes which flow through, or past, or are situate within the land of two or more occupiers is vested in the Crown. Private rights are almost wholly abolished, riparian law is simplified, and a system of licences is established for the protection of private works of water conservation, irrigation, water supply, drainage, and the prevention of inundation of land. The enactment prevents litigation and determines the rights of riparian owners.

During the year ending 30th June, 1927, applications were received under the Water Act 1912 for 216 new licences and 247 for renewals of existing licences for pumps, dams, and other works. The new licences issued were 132 in number, while 34 were not renewed, so that on the 30th June, 1927, there were 2,060 in force. In most instances the period for which these licences are issued is five years. A fee covering the whole of the period of each licence is charged to cover the cost of administration.

(viii) *Water Trusts and Bore Trusts.* Part III. of the Water Act 1912 provides for the supply of water either for irrigation, stock, or domestic purposes, and for drainage of land. The liabilities thereon are repaid to the Crown, with interest spread over a period of usually from 10 to 28 years inclusive. Under the law the administration, except for the Western Division, is vested in trustees—either 3 or 5 to each trust, of whom, in the former case, one is the official trustee representing the Government, and in the latter two are official trustees acting in a similar capacity. In the Western Division the Western Land Board is appointed as trustee. For the supply of water, trusts have been constituted in connexion with (*a*) 76 Bore Water Trusts; (*b*) eight schemes for the improvement of natural off-takes of effluent channels, for the purpose of diverting supplies from the main rivers; (*c*) in five instances for the construction of weirs across stream channels; (*d*) eight pumping schemes; and (*e*) one for impounding by means of regulators water which flows into natural lakes. The area included within these trusts amounts to :—Bore Water Trusts 4,870,892 acres and Water Trusts and Irrigation Trusts 3,686,771 acres.

In addition to the Trusts Districts, there are 12 Artesian Wells Districts totalling 324,947 acres supplied with water under the provisions of Part V. of the Water Act of 1912.

Included in the above total are four Trusts constituted under the Water (Amendment) Act 1924, which enables the Water Conservation and Irrigation Commission to exercise control over the subdivision of holdings by private persons who desire to provide works for the supply of water, and then subdivide and dispose of such in small areas as irrigated blocks.

3. **Victoria.**—(i) *General.* The Water Conservation Works in Victoria consist of irrigation works proper, and those providing mainly a domestic supply, such as the works for the supply of Melbourne, controlled by the Melbourne and Metropolitan Board of Works; the Coliban, Wonthaggi, Broken River, Kerang Lakes, Naval Base and Mornington Peninsula, and Mallee Supply Works administered by the State Rivers and Water Supply Commission; and other works of domestic supply controlled by Water Works Trusts or Municipal Corporations. Particulars of the works not controlled by the Commission will be found in the chapter on Local Government in this volume. With the exception of that of the First Mildura Irrigation Trust, all the irrigation schemes, and the more important domestic and stock water-supply works in rural districts, are vested in and controlled by the State Rivers and Water Supply Commission, a body composed of three members, which was created by the Water Act 1905, now incorporated in the Water Act 1915.

While not covering the whole of the activities of the State Rivers and Water Supply Commission, the particulars in the following statement will furnish a general idea of the development of water conservation and distribution in Victoria under its administration; also of the value of an efficient water supply to country lands, whether for domestic and stock purposes only, or for the addition of irrigation to lands already so supplied :—

	At 30.6.07—	At 30.6.27—
Irrigation Districts—		
Number of Districts administered	9	30
Number of Districts having Water Rights	Nil	22
Total of such Water Rights	Nil	370,000 acre-feet
Area under Irrigated Culture	108,000 acres	407,000 acres
Valuation for Rating purposes	£196,000	£657,000
Rural Waterworks Districts—		
Number of Districts administered (excluding Coliban)	3	25
Valuation for Rating purposes	£125,000	£1,572,000
Urban Districts—		
Number of Districts administered	1	60
Valuation for Rating purposes	£5,600	£436,000

The storages for irrigation and domestic and stock supply purposes have, at present, a total capacity of 1,162,000 acre-feet. The completion of works now under construction will bring the total to over 1,280,000 acre-feet, as against a total of 172,000 acre-feet in 1902. The capacity of the Hume Reservoir, which is being constructed on the Upper Murray, is not included in these figures. This reservoir, when completed, will contain 2,000,000 acre-feet, half of which, under the provisions of the River Murray Agreement, can be credited to the State of Victoria.

(ii) *Irrigation Schemes.* (*a*) *General.* This division comprises the schemes constructed and under construction for the supply of water to some twenty-nine irrigation districts. Up to 1906, irrigation schemes were controlled by local Trusts, which had obtained the moneys for their construction on loan from the State. By the Water Act 1905, all local control was abolished except in the case of Mildura, and the districts were transferred to the State Rivers and Water Supply Commission. Since that date the Government has adopted a vigorous irrigation policy, and the capital expenditure at 30th June, 1927, on water supply for the irrigation and water supply districts under the control of the Commission and at Mildura, exclusive of the amount of £1,427,000 expended by it on River Murray Agreement Works, was £9,735,000. The irrigation works draw their supplies mainly from headworks constructed on the Goulburn, Murray, and Loddon Rivers. The cost of these headworks, which now stands at £1,127,000, is not debited to any particular districts, but is borne by the State. The extent of land under irrigated culture during the year 1926–27 for all kinds of crop was 406,532 acres, the largest yet recorded, being an increase of 70,056 acres over the average area irrigated during the previous five years.

(*b*) *Goulburn Irrigation System.* The Goulburn Irrigation System (see Official Year Book No. 13, map on page 561) is the largest project of the kind in Victoria. The need for irrigation in the Goulburn Valley is indicated by its low annual rainfall, 18 inches, while the great variation in the rainfall over the catchment area, 20 inches to 52 inches; in the rate of flow, 180 cusecs* to 80,000 cusecs; and in the volume of the annual river discharge, 620,000 acre-feet to 6,200,000 acre-feet, reveal clearly the necessity for regulating the river flow by storage. The progress made in this direction is shown by the fact that the existing storages of this system will hold some 660,000 acre-feet, which, added to 300,000 acre-feet divertible direct from the river, brings the total artificial supply to 960,000 acre-feet.

The Goulburn Scheme comprises a diversion weir on the Goulburn River, near Nagambie, which raises the summer level of the river about 45 feet to 408 feet above sea level, the height necessary to command the lands to be irrigated; two main channels, the eastern diverting water to the Shepparton Irrigation District, and the western supplying the eastern half of the Rodney main channels and filling Waranga Basin, the principal storage reservoir of the scheme. Two further main channels issue from this reservoir, one feeding the western half of the Rodney main channels, and the other serving settlements due west as far as the Loddon River. Further details in respect of this scheme are contained in previous issues of the Year Book (see Official Year Book, No. 19, page 834).

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* Cusecs — Cubic feet per second.

In view of the continually increasing demand for water in dry seasons, and the repeated requests for extensions of the system, the Commission had investigations made to determine the most suitable site for an additional storage reservoir. After a number of sites had been examined as to foundations, probable storage capacity, and estimated cost, the Commission adopted what is known as the Sugarloaf site, just below the junction of the Goulburn and Delatite Rivers, as the most economical. A dam has been constructed to a height of 140 feet above the river bed, its foundation being in places 75 feet below the natural surface. It has an over-all length of 3,000 feet, of which 2,300 feet consist of "rock fill" bank with a reinforced concrete-core wall, the remaining 700 feet being of mass concrete, and forming a flood spillway. The dam submerges an area of 8,000 acres and permits the storage of 306,000 acre-feet of water. The catchment area above this reservoir is 1,500 square miles.

The portion of the State at present served by the Goulburn system comprises 64,700 acres east of the river, 564,000 acres between the Goulburn and the Campaspe, and 335,400 acres between the Campaspe and the Loddon. These areas include the irrigated closer settlements at Shepparton, Stanhope, Tongala, Rochester, Echuca North, and Dingee, as well as the districts formerly controlled by the Rodney and Tragowel Plains Trusts, where the holdings are larger than in closer settlement areas. The main channels of the system have an aggregate length of 200 miles, in addition to which there are 2,000 miles of distributaries, a total for the whole system of 2,200 miles.

The balance of the area, including Deakin District, is provided with a domestic and stock supply, and water is sold for occasional irrigation on application. The amount of the compulsory charge for irrigation water allotted as a "right" in the older districts is at present 7s. per acre-foot in the two districts—Tragowel Plains and Dingee—farthest removed from the sources of supply, 7s. 6d. in special circumstances at Echuca North, and 6s. per acre-foot elsewhere.

Following strong demands for the extension of existing districts and the provision of an irrigation supply for new areas, the Commission is having the eastern main channel enlarged for its whole length, and extended to command large areas of land north of Shepparton District, and to serve also the suitable lands commanded south of the Broken River. The progress made with the works south of the Broken River has been such that a new irrigation district, "South Shepparton," of 14,000 acres was constituted in 1924, and has since been extended to contain in all 34,000 acres. In this district water rights of 1 acre-foot of water to each 4 acres of irrigable land have been allotted, the compulsory charge owing to the greater cost of construction being, for the present, 8s. per acre-foot. The main distributary channels north of the river are already capable of supplying about 35,000 acres north of Shepparton District with water for domestic and stock supply and partial irrigation, and about 9,000 acres at Katandra, purchased for closer settlement, with an assured supply for intense culture. These areas will therefore be constituted irrigation districts. The Waranga Western main channel has been enlarged from 520 to over 800 acre-feet per day from the Piccaninny Creek to a point about 1¼ miles westward. From this point a new channel—the Tandarra–Calivil main—has been constructed through Dingee District and an adjoining area known as Calivil to the No. 1 main of Tragowel Plains District. This new channel came into use in September, 1926, and has since relieved the pressure on the Tragowel Plains system, and released most of the capacity of the Waranga Western main channel for the delivery of supplies to the new Calivil area, and to supplement the supply to Boort District, previously dependent mainly on the Loddon River.

The development of the fruit-canning industry emphasizes the success of irrigation in the Goulburn Valley. The canneries at Shepparton and Kyabram, together with the recently established one at Mooroopna, processed during the year the largest pack of canned fruit yet produced in Victoria, the aggregate of the three canneries being 17,000,000 tins.

(c) *River Murray Irrigation Schemes.* The group of irrigation schemes for the service of the districts along the frontage of the River Murray, and drawing supplies direct from that river, ranks next in importance in point of development to the Goulburn Irrigation System. These schemes already supply an area of 404,000 acres, served by 1,700 miles of channels, and are capable of considerable expansion when the Hume Storage Reservoir, now under construction, becomes operative.

The districts supplied are all situated in the portion of the Murray Valley below the town of Echuca, and in an area of comparatively low rainfall. Those between Echuca and Swan Hill, excepting Tresco, are supplied by gravitation, while the Tresco district, and those lower down the river—Nyah, Merbein, Mildura and Red Cliffs—are supplied by pumping.

The present headwork of the gravitation schemes is a weir and lock at Torrumbarry—some 20 miles (by road) down-stream from Echuca—constructed under the powers conferred by the River Murray Waters Acts, the constructing authority being the State Rivers and Water Supply Commission.

This weir was commenced early in 1919 and completed in the latter part of 1923. It raises the summer level of the river by some 16 feet, and thus substitutes continuous diversion for the intermittent diversion hitherto dependent on the varying level in the river, and at the same time provides for the passing of river craft but without offering serious obstruction to the passage of floods.

These objects have been achieved by the construction of a concrete foundation, combined with movable steel trestles, which support stop bars to the height necessary to keep the river at diverting level. In times of flood the bars, and if necessary the trestles themselves, are removed to the river bank.

The effect of this work, as regards irrigation, is the ensuring of a regular supply by gravitation throughout the year to the districts between Torrumbarry and Swan Hill. The districts first benefited by this supply are those known as Cohuna, Gannawarra, Koondrook and Swan Hill, comprising in all 194,000 acres on the river frontage (hitherto dependent on pumping plants during low stages of river flow), and the Kerang districts and adjacent areas, containing about 112,000 acres, more distant from the river, and receiving a more or less irregular supply, by gravitation, from the Kow Swamp Free Headworks. These headworks comprise a gravitation offtake at the effluence from the Murray of the Gunbower Creek; a main channel thence (the Gunbower Creek improved) to Kow Swamp Reservoir, a natural depression improved so as to hold 40,860 acre-feet; and a main supply channel therefrom (the Macorna channel) westward to the Loddon River.

The quantity of water allotted as a "right" in these districts is one acre-foot per irrigable acre. The compulsory charge is at present 6s. per acre-foot of such water rights. In Kerang district—not yet under a compulsory irrigation charge—water is sold to irrigators on application at a charge not exceeding 4s. per acre foot of water supplied. The districts supplied include the Cohuna, Koondrook, and Swan Hill Closer Settlement Estates, comprising in all 34,000 acres. Of this area 8,000 acres were specially purchased for soldier settlement, the channel systems being correspondingly extended.

In addition to improving the supplies to existing irrigation districts, the Torrumbarry weir will enable large areas adjacent to these districts to be commanded by extensions of existing gravitation channel systems. The most important works so far constructed for this purpose are (*a*) the Gunbower–Cohuna Main Channel, which with the necessary distributaries provides water for irrigation for the new Leitchville Irrigation District of 10,000 acres situate between Kow Swamp State Works and the Cohuna Irrigation District, and (*b*) the Third Lake Main Channel and distributaries, which convey supplies for the irrigation of some 13,000 acres of land (constituted the Third Lake Irrigation District) and 5,800 acres (constituted the Fish Point Irrigation District) lying between that Lake and the Little Murray River.

Extensions of irrigation schemes dependent on the River Murray, hitherto impracticable owing to lack of storage on that river, will be rendered possible on the completion of the Hume Reservoir. This storage work, now in course of construction jointly by the States of New South Wales and Victoria, is one of the works authorized by the River Murray Waters Acts. Detailed reference to this undertaking will be found at the end of this section.

The irrigation areas supplied by means of pumping, and not commandable by gravitation from the Torrumbarry offtake, stated in geographical order, are the Tresco Irrigation District, the Nyah and Merbein Murray Frontage Settlements, the First Mildura Irrigation Trust District, and the Red Cliffs Soldier Settlement.

The Tresco District of 4,000 acres, created by private enterprise, and recently taken over by the State Rivers and Water Supply Commission, is supplied by water lifted from Lake Boga by pumps throwing 80 acre-feet per day. Its channel mileage is 50. The water supplied is 2½ acre-feet to each irrigable acre, and the compulsory charge at present £2 per acre.

The Nyah Irrigation Area is supplied with water diverted from the Murray by a high-lift pumping plant—capacity, 94 acre-feet per day. The total length of the channels is 51 miles, of which 33 miles are lined with concrete. The settlement contains 3,700 acres, subdivided into 237 holdings of an average area of 15 acres—practically all settled. The settlers include 66 discharged soldiers. Water rights are apportioned to these holdings on the basis of 2½ acre-feet of water for each irrigable acre, and the compulsory charge is at present 20s. per acre-foot of such water rights. The land is devoted mainly to vineyards and orchards, and the settlers, taken as a whole, are making good progress. More than 3,000 tons of dried fruits were packed at Nyah packing sheds during the 1926-27 season. The value of irrigation to the district is reflected in the selling price of the land, fully planted blocks bringing remarkably high prices.

The Merbein Irrigation Area comprises 8,300 acres, originally Crown lands. This settlement now contains 423 holdings, averaging 20 acres each, practically all settled, the settlers including 161 discharged soldiers. The water is obtained from the Murray by pumps, which deliver 225 acre-feet per day. The main and distributary channels have a combined length of 60 miles. The land settlement conditions and the water rights apportioned are the same as at Nyah, but the compulsory charge is 24s. per acre-foot. The Merbein Works supply also the adjacent Yelta Waterworks District of 32,000 acres.

The Red Cliffs Irrigation Settlement comprises an area of 18,000 acres including the township and 15,000 acres of first class irrigable land adjoining the Mildura Settlement. It is the irrigable portion of the large Red Cliffs estate of 33,000 acres, known as the Debenture Holders' Land, acquired by the State for soldier settlement. The scheme of works for this district ranks first in importance among Victoria's pumping systems. It includes a pumping plant capable of delivering 500 acre-feet of water per day, lifted 105 feet, a reinforced concrete rising main 6 feet 6 inches in diameter, 34 chains long, two electric generators each of about 350 k.v.a. capacity, to provide for re-lifts, and a system of main and distributary channels to command every holding in the district. The three pumping units have already been installed and are in operation. The total length of channels constructed to date is 124 miles, the excavation involved totalling 665,000 cubic yards. Channels having a length of 114 miles have been lined with concrete with the result that 699 blocks, 99 per cent. of the total in the settlement, are protected from seepage from the channels. Some 700 discharged soldiers have been allotted blocks on this settlement. The Red Cliffs township, which is growing rapidly, has been proclaimed an urban division of the Irrigation District, and is supplied with the necessary reticulation from a concrete stand pipe 70 feet high and 26 feet in diameter. The Red Cliffs works supply also the adjacent Carwarp and Carwarp Central Waterworks Districts having a total area of 215,300 acres.

The area planted to date consists of 8,150 acres of vines and 600 acres of citrus trees. The first harvest (1924) returned 570 tons of dried fruit, in addition to which large quantities of table grapes were sold for consumption. The 1927 harvest produced 11,000 tons of raisins, currants, and sultanas, in addition to large quantities of grapes sold for dessert and distillation.

(*d*) *Loddon River Scheme.* This also is wholly a gravitation system, with a regulating weir on the Loddon at Laanecoorie as its headwork. Its storage capacity is 14,000 acre-feet, and other works include timber diversion weirs at Serpentine and Kinypanial, and 160 miles of channels in the Boort district, which supply an area of 79,000 acres for domestic and stock purposes and partial irrigation.

(*e*) *Werribee River Schemes.* (1) *Bacchus Marsh.* The headwork of this gravitation scheme is a reservoir of 15,000 acre-feet capacity on Pyke's Creek, a tributary of the Werribee, the intake from the creek catchment being supplemented by a tunnel through a dividing spur, which taps the Werribee River near Ballan. The area of the district is 6,700 acres—half of which is irrigable and includes some of the richest lucerne land in the State. The annual water right is one acre-foot per irrigable acre, and the present compulsory charge is 22s. 6d. per acre-foot of such right. The higher portion of the district receives a supply for domestic and stock purposes.

(2) *Werribee.* This is another gravitation scheme on the same river, with a reservoir of 17,000 acre-feet capacity at Melton as its headwork. The irrigation district comprises 10,000 acres of first-class land, being the irrigable portion of the Werribee Closer Settlement Estate, which is within 20 miles south-westerly of Melbourne. The water-right allotment is one acre-foot per irrigable acre, and the charge at present is 12s. per acre-foot. The non-irrigable portion of the estate, containing about 13,000 acres, is supplied with water for domestic and stock purposes.

(*f*) *Macallister River* (*Maffra*) *Scheme.* The works of this scheme, the first irrigation scheme in the south-eastern portion of the state, now in course of construction, comprise a storage reservoir on the Macallister River, at Glenmaggie near Heyfield, and a system of main and distributary channels capable of commanding by gravitation some 80,000 acres of the rich river flats along the Macallister, Avon, and Thomson Rivers, near Maffra, Stratford, and Sale. The conditions in these areas as to quality of lands and annual rainfall are similar to those at Bacchus Marsh and Werribee before irrigation. The design of the dam—a large cyclopean concrete structure 1,000 feet in length—provides for the raising of water to a maximum height of 100 feet above the foundations. The catchment area above the dam is 813 square miles and the area submerged at full supply level will be 4,500 acres, while the capacity of the storage will be 150,000 acre-feet, and the unregulated flow of the river will yield an additional 100,000 acre-feet. The construction of the works is practically complete. Approximately 80,000 acre-feet of water can now be stored, and arrangements can be made to store the whole volume of 150,000 acres. The commanded lands are specially suitable for beet culture and dairying, and include some 11,000 acres acquired by the State Rivers and Water Supply Commission for soldier settlement. The area first supplied was 8,000 acres of the Avon River flats, including the Boisdale Closer Settlement Estate, and was constituted the Maffra Irrigation District in 1927. This district was subsequently extended to include a total supplied area of 20,000 acres. Further extensions of the channels enabled supplies to be given to settlers on some 6,000 acres of closer settlement estates, and 9,000 acres of private holdings in the vicinity of Sale, and the Sale Irrigation District of 15,000 acres has been constituted accordingly, making the total area now served by the Maffra-Sale system 35,000 acres. Outlets for the produce of irrigated farms are already provided by the sugar, butter, and condensed milk factories, which are within easy reach, while the proximity to railway stations ensures to settlers the necessary transport facilities.

(iii) *Domestic and Stock Schemes.* (*a*) *General.* The second division takes into account the schemes constructed and under construction for the supply of water for domestic and stock purposes, the capital expenditure on which at 30th June, 1927, was £7,774,000. The area of country lands artificially supplied with water for these purposes is 23,188 square miles. The number of towns supplied, exclusive of the City of Melbourne and its suburbs, is 205, serving an estimated population of 369,580. In addition to the Commission's districts, some large areas are still administered by local authorities.

(*b*) *Wimmera-Mallee System.* The principal scheme in this division is that known as the Wimmera-Mallee Gravitation Channel System. This comprehensive scheme of works will compare favourably, it is believed, with any similar individual scheme for domestic and stock service, in any part of the world. The main supply is drawn from four reservoirs in the catchment area of the Wimmera River, at the foot of the Grampians Ranges, viz. :—Lake Lonsdale, Wartook, Fyans Lake, and Taylor's Lake. The reservoirs in use, including some minor works, have a combined storage capacity of 164,870 acre-feet. The completion of the works in progress will bring this total to 212,870 acre-feet. The water is conveyed partly by natural water-courses but chiefly by artificial channels aggregating 5,200 miles in length over farming districts comprising about 11,000 square miles, approximately one-eighth of the whole State (see Official Year Book No. 13, map on page 562). This system also furnishes supplies for 31 townships controlled by the Commission, and 6 towns controlled by local Waterworks Trusts or Shires. The construction of the new main channel from the Wimmera River at Glenorchy to the important town of Charlton on the Avoca River provided not only a full gravitation supply of good quality to that town, in lieu of the poor unsatisfactory supply previously pumped from the Avoca River, but, in addition, greatly improved supplies for domestic and stock purposes to about 236,000 acres in the districts of four local Waterworks Trusts, and the area so served has, with the concurrence of those bodies, been added to Waterworks Districts under the jurisdiction and control of the commission. As this area included the entire districts of the West Charlton and Shire of Donald Waterworks Trusts, these trusts were abolished under the provisions of the Water Acts.

(c) *Northern Mallee Water Supply Scheme.* In what is known as the northern Mallee, an area of about 1,250,000 acres, adjoining the Wimmera-Mallee Gravitation Channel System, but above its channel level, the Commission has provided a water supply for the large wheat holdings in the Walpeup and adjoining districts, by means of bores and large public tanks. The number of successful Government bores in use in this area is 99, their average depth being 460 feet. There are also 260 tanks, having a total capacity of 1,209,600 cubic yards, or 204 million gallons.

(d) *Carwarp Scheme.* The works of this scheme—a system of distributary channels—were constructed to provide domestic and stock supplies for an area of 215,300 acres of Mallee lands situated immediately south of the Red Cliffs Irrigation District and traversed by the Mildura Railway, the supply being drawn from the Red Cliffs pumping station. The whole of this area was at first embraced within the Carwarp Waterworks District, but, subsequently, an improved supply was given to some 15,000 acres around the railway station, and above the general level of the surrounding country, by means of a pump and rising main, with 12 miles of channels. The high lands so supplied have been constituted the Carwarp Central Waterworks District.

(e) *Millewa Scheme.* This recent and important addition to Victoria's water supply schemes for domestic and stock purposes is designed to serve 1,000,000 acres of the extreme northern Mallee between the Mildura railway and the South Australian border, which is being opened up for settlement by this water supply scheme, and the construction of 55 miles of railway from Red Cliffs westward toward South Australia. The water for this extensive area will be drawn from the River Murray. The scheme comprises two main lifts, of about 113 and 145 feet respectively, the first lift being from Lake Cullulleraine on the flats 5 miles from the Murray. This lake, the main storage of the scheme, which holds 2,000 acre-feet, will be filled from No. 9 Lock now in course of construction. Holdings aggregating 600,000 acres have already been allotted to 421 settlers, and, for the service of this area, 563 miles of channels have been excavated, and 31 earthen storages, with a combined capacity of 317,000 cubic yards, have been constructed at convenient distances from railway stations. The first unit of the pumping scheme and the rising main having been completed, water was turned into the channels and storages early in 1924, and in May and June of that year the whole occupied area received a supply of water by channel. The extension of the pumping stations to their final capacity is being proceeded with. The Lower Millewa Waterworks District constituted in 1924 with an area of 250,000 acres has been extended, as the works progressed, till some 583,000 acres are being served. This area includes 205,000 acres above the general level of the District which is being supplied by a relief pumping plant, and which in view of the higher cost of supply will be constituted a separate district. The construction of the remaining works of the scheme will precede the throwing open of additional lands for settlement. In this area and the adjacent Sunset country, 80 tanks have been constructed with a total storage capacity of 110,700 cubic yards.

(f) *The Coliban System* comprises two main storage reservoirs on the Coliban River, on the northern slope of the Dividing Range, the "Upper Coliban" with a capacity of 25,700 acre-feet, and "Malmsbury" with a capacity of 12,300 acre-feet, together with main and distributary channels aggregating 340 miles in length, 23 subsidiary reservoirs with a total capacity of 5,120 acre-feet, and 300 miles of urban pipe reticulation. This scheme supplies water for domestic and stock purposes to the city of Bendigo, also to Castlemaine, Maldon, and eighteen other townships, and the interjacent rural districts, containing in all some 235,000 acres. The population served is 61,000. This system also supplies the demands of the quartz and sluice mining industries throughout this area, and provides water for irrigation for orchards, market gardens and similar purposes, the area irrigated annually being about 7,000 acres.

(g) *Naval Base and Mornington Peninsula Scheme.* Another scheme in this division which calls for mention here is the Naval Base and Mornington Peninsula Scheme. The comprehensive scheme—prepared at the request of the Naval Authorities—is for the supply of water to the Flinders Naval Base, and for the service of fifteen townships *en route,* including Berwick, Beaconsfield, Pakenham, Aspendale, Chelsea, Carrum, Frankston, Mornington, and Hastings. An ample supply of water is obtainable both for ordinary domestic and stock use and for market gardening, in the vicinity of Dandenong, from the headwaters of the Bunyip River, which drains some 30 square miles of forest country above the point of off-take. The works are so far advanced that water is already being delivered at the Naval Base, and to the townships of Mornington, Mount Martha, Frankston, Carrum, Aspendale, and the intervening bayside resorts, as well as the inland townships of Beaconsfield, Berwick, Cranbourne, Somerville, and Bittern.

The scheme has been extended to supplement the supply to the township of Dandenong hitherto controlled by a local Trust, the works of which were recently transferred to the Commission, which will administer them as part of the general scheme. The expansion of the reticulation systems in this district having necessitated the provision of additional supplies to meet the demand during dry periods, the Commission has constructed a new Main Supply Line from Toomac Creek to the headwaters of the Bunyip River. This extension, which includes 25 miles of open race and 8 miles of 2-ft. pipes, proved most conclusively during last summer the value of that river as a source of supply for the Mornington Peninsula areas.

An important development of this scheme was the purchase by the Commission of 3,300 acres of land in the vicinity of Narre Warren, on the main Gippsland railway, for closer settlement under irrigation. This land, which is within about 25 miles of the metropolis, is being subdivided into blocks of 10 to 15 acres, suitable for market gardening and other forms of intensive culture. Drainage works will be provided where necessary, and every block will receive a satisfactory supply of water under pressure from a pipe system connected with the main race. Electricity for all purposes will be available from the works of the Electricity Commission. The land is being settled under the ordinary closer settlement conditions, and there is a good demand for the blocks.

(h) *The Bellarine Peninsula Works.* The long felt need of an efficient water supply for this peninsula, including the towns of Portarlington and Queenscliff on Port Phillip Bay and the seaside resorts along the south-eastern coastline of that area, has led to investigation of proposals for a similar scheme to serve these areas by supplies drawn from the headworks of the Barwon River. A comprehensive scheme has been prepared, which comprises a large storage reservoir at Wurdee Boluc, to be filled by an inlet channel which would tap various tributaries of the Upper Barwon, beginning with Retreat Creek and the eastern branch of Pennyroyal Creek, and gradually extending to pick up the flows of the larger and more permanent tributaries as the demand for water grows. This scheme, which would serve the above-named towns, also Drysdale and other inland townships, and the coastal townships from Point Lonsdale to Anglesea, would in addition furnish a much needed supplementary supply to the city of Geelong, thus allowing the development of that important centre to be unchecked. The scheme has been endorsed by the Municipal Authorities concerned and the Commission is now proceeding with the work of construction.

(i) *The Kerang North-West Lakes Works* consist of a chain of lakes, situate a few miles to the north-west of Kerang, connected by channels to each other and to the Loddon River, and improved so as to be capable of storing 88,500 acre-feet of water. This system serves, for domestic and stock purposes, an area of 40,000 acres, constituted the "Kerang North-West Lakes Waterworks District." When the supply from the Loddon River is insufficient, the lakes are filled by gravitation from the Torrumbarry Weir, on the River Murray, via the Kow Swamp Irrigation Works. The water is diverted along Sheepwash Creek—an improved natural effluent from the Loddon—the river level having been raised by a concrete weir at Kerang. As in the Coliban District, limited quantities of water are sold on application for irrigation purposes, about 5,500 acres having been irrigated annually from this source for some years. These irrigation facilities have been so appreciated that, in response to a strong demand, an irrigation District of 18,000 acres (" Mystic Park ") has been constituted on the west of the Lakes, and further works have been constructed to provide an irrigation supply to some 13,000 acres lying to the north of " Third Lake." This area has also been constituted an Irrigation District in which water rights will be allotted on the basis of two acre-feet of water to each three-acres of irrigable land. To provide complete circulation throughout the chain of lakes a large channel with a capacity of 400 acre-feet per day has been constructed from Lake Tutchewop to Lake Boga.

(*j*) *The Broken River Works* comprise two weirs—" Casey's " and " Gowangardie "—above Shepparton, and offtake works therefrom, for the diversion of water into the channels of the Tungamah, Shepparton, and Numurkah Waterworks Trusts.

(*k*) *The Wonthaggi Works* comprise a storage reservoir on Lance Creek, capacity 421,000,000 gallons, a main pipe line therefrom 9 miles in length to the coal-mining town of Wonthaggi, a service reservoir—capacity 1,400,000 gallons, and 18 miles of pipe reticulation for the service of that town. The population supplied is 5,000, and there is a service to the State Coal Mine and Railways Department.

(iv) *Flood Protection.* The Water Acts of Victoria provide for the constitution of Flood Protection Districts, in which the residents are rated for schemes carried out for their benefit. The works are constructed, and districts administered by the State Rivers and Water Supply Commission, and the Commission is carrying out extensive schemes at Koo-wee-rup and Cardinia, in the south-eastern portion of the State, at Loch Garry and Kanyapella on the Goulburn River between Shepparton and Echuca, and works on a smaller scale at the town of Echuca.

The Koo-wee-rup and Cardinia Flood Protection Districts together embrace the whole of a large continuous depression south of the main Gippsland railway and along the sea-board of Westernport, containing in all about 100,000 acres of very fertile country, the proper development of which was seriously retarded by periodical inundations. A large portion of the land was reclaimed, subdivided, and settled by the State, but is became evident, during periods of heavy rainfall, that only a comprehensive drainage scheme for the whole area affected would afford the needed protection from flooding.

At the request of the settlers, the Commission prepared schemes for this purpose, and, after the concurrence of the settlers had been obtained, practically carried the schemes into effect ; and the two large districts above-mentioned were constituted, and are now being rated on an acreage basis in respect of benefits derived from the works. The Commission's works are now well advanced, and provide flood protection from all but abnormal floods, and the duration of even these is considerably shortened and their effect correspondingly lessened as the result of the works, which consist of the substantial enlargement and remodelling of most of the existing principal drains, the construction of new internal drains, and the cutting of several distinct outlets, thus avoiding concentration of flood waters in the main drains.

The Loch Garry Flood Protection Works comprise about 5½ miles of earthen levee banks around Loch Garry, and a concrete regulator and spillway 400 feet in length, to control overflows from the loch. The purpose of the scheme is to protect some 40,000 acres of lands previously flooded by overflows of the Goulburn River by way of Loch Garry and Bunbartha Creek. The Kanyapella Scheme provides for the conservation of a domestic and stock supply in Warrigal Creek, and the exclusion therefrom of certain flood waters. The area benefited is 13,500 acres. Both schemes have been approved by a majority of the land holders concerned and are now in operation.

(v) *Mildura.* The Mildura Irrigation Scheme is controlled by the First Mildura Irrigation Trust, and water is obtained by pumping from the River Murray. The area of the settlement is 45,000 acres, of which 14,000 acres are under intense culture, vines predominating. During the year ending 30th June, 1927, the Trust's receipts aggregated £50,902, and its expenditure £39,577 ; whilst loans—exclusive of £13,483, arrears of interest—advanced by the Government, amounted at 30th June, 1927, to £96,837. The number of water-acres supplied during the year was 42,134.

4. Queensland.—The main irrigation works in Queensland are as follows:—

(i) *Dawson Valley Scheme.* The Dawson Valley Irrigation Scheme, now in its initial stage, comprises:—(*a*) A concrete dam at Nathan's Gorge, some 30 miles below the town of Taroom, to impound 2,500,000 acre-feet of water: (*b*) an offtake weir 80 miles down stream for the diversion of water for the irrigation of 70,000 acres in the Dawson Valley; and (*c*) and Theodore Zone (see below).

The Dawson River rises in the Great Dividing Range. The catchment above the proposed Nathan Dam is 9,000 square miles, over which the average annual rainfall is 27 inches. An arched dam is involved, with termini on lines tangential to the curve. The rock forming the foundations is a hard sandstone, the crushing strength of which ranges from 3,000 to 5,000 lb. per square inch. It is designed to fix the water level 130 feet above summer water level at the site, and the crest height at 145 feet, with a spillway on the left bank. The crest length of the dam will be 860 feet, 500 feet on the curved portion. The reservoir will be the largest artificial storage in the world.

An approach road from Wandoan Railway Station to the dam site has been under construction during the year. This is 54 miles in length and now available for light traffic, so that the carting of plant and materials for the construction of the Nathan Dam can be commenced at an early date.

The irrigable lands are of a good agricultural type with good capillarity, ample humus, and containing liberal amounts of all mineral plant foods in readily available form. About 120,000 acres are commanded on the eastern side of the river, and 80,000 on the western side. A hydro-electric station at the Nathan Dam may utilize the water power to irrigate high level lands not commanded by gravitation, provide stock and domestic supplies to dry areas, power for factories, and light throughout the settlement.

The Dawson Valley is situated in the Central Division of the State, which comprises 209,340 square miles, or nearly one-third of the total area of Queensland. The population is less than one person to two square miles, and subtracting those resident in the principal towns, the ratio is one inhabitant to four square miles, although there is only a comparatively small proportion of inferior land in the whole area. This irrigation scheme not only provides an opportunity for increasing population and extending agriculture, but will also form a fodder reserve area for pastoral lands where rainfall is insufficient for agriculture, and water conservation impracticable. A fodder conservation proposal is being considered for the early stages of settlement with this end in view, and to give settlers an opportunity readily to dispose of some of their produce.

A railway line is constructed through the irrigation areas from the terminus of the Dawson Valley line at Baralaba to Theodore, the first zone to be settled.

In order to minimize heavy interest charges accruing during the process of construction, the project has been designed on the zone system, by which one area is prepared for settlement and completed before the next zone is proceeded with. Five zones have been designed, each comprising a certain area of irrigated land attached to a considerable acreage of dry lands. The dry lands will be allotted in proportion to irrigated land held. Though forming an integral part of the gravitation system, each zone will be a separate entity, served by its own central township, and in close connexion with the Dawson Valley railway system.

Theodore Zone. On the completion of all necessary works for irrigation purposes the Theodore zone of 30,000 acres was thrown open for selection on 1st November, 1926, and by the 30th June, 1927, 55 farms were occupied. This area is divided into 373 farms, of which 264 are irrigated and 109 are attached dry farms. A considerable proportion of the latter consists of good vine scrub land, and all is classed as soil suitable for agriculture, on which dry areas products such as wool, butter, cotton, etc., can be raised in conjunction with an irrigation farm, as an insurance over dry periods. The rich country back from the river flats is expected to form a great attraction to settlement. The pumping station established on the river operated satisfactorily during the past year. The river bank at this point is higher than the surrounding 5,000 acres, so that when the water is pumped up, the channels radiating from the Power Station carry it by gravitation. Local storage of over 2,000 acre-feet has been obtained by the erection of a timber and earth weir below the pumping station, the crest of which is 8 feet above ordinary summer level of the river.

(ii) *Inkerman Irrigation Area.* This area is situated at Home Hill, Ayr district, using the waters of the Burdekin River, with electrically operated shallow well pumps. The number of wells and pumps is 230, and the acreage under irrigation during 1926–27 exceeded 5,000 acres. Provision is being made to increase this area to 10,000 acres.

(iii) *Other Schemes.* Smaller schemes include Townsville (wells, creek, and river); Rockhampton (wells, river, creek, etc.); those at Bingera, near Bundaberg, which utilize water pumped from the Burnett River just above the point of meeting of the salt and fresh waters; and those at Fairymead, which utilize water pumped from a number of shallow spear wells sunk on the alluvial flats on the north side of the Burnett River and about 6 miles from Bundaberg.

5. **South Australia.**—(1) *The Renmark Irrigation Trust.* The Renmark Irrigation Trust was established on similar lines to Mildura, but on a smaller scale. The area of settlement is 23,000 acres, and the irrigated area 7,700 acres, while the population of the town and settlement is 4,800. Water is obtained from the Murray by pumping. The main pump situated on the river bank lifts the water into a large lagoon, from which three further pumps of 17 feet, 26 feet, and 27 feet-lift raise the water and irrigate 950, 4,200, and 1,800 acres respectively. A fifth pumping plant again lifts the water 26 feet and irrigates 750 acres. The total length of the channels is 78 miles, and of roads 98 miles, while the annual water rate is £2 5s. 0d. per acre. It is anticipated that when Murray locks 4 and 5 are completed, it will be possible to gravitate the water into the lagoon, and plans are on foot for the establishment of a central power station and the gradual electrification of all the pumping plants. Cultivation on the settlement is as follows: Sultanas, 2,441 acres; currants, 1,335 acres; gordos, 922 acres; doradillos and wine grapes, 404 acres; pears, 155 acres; apples, 8 acres; apricots, 292 acres; peaches and nectarines, 109 acres; citrus fruits, 438 acres; figs, 11 acres; prunes, 7 acres; olives, 39 acres; miscellaneous fruits, 16 acres; and the balance in fodder crops. The most up-to date and largest fruit-packing shed in the State is situated at Renmark, and is co-operatively owned, as is also a large distillery for the manufacture of grape spirit. There are several private packing sheds and a private distillery.

(ii) *Other Waterworks.* A number of country water-works is under the control of the Public Works Department. As, however, they are not irrigation works properly so called, but are used for supplying water for domestic purposes, etc., to several towns, no further reference will be made to them in this chapter. (See chapter on Local Government.)

(iii) *Areas under Irrigation.* The Irrigation Areas on the River Murray above Morgan under Government control up to the end of June, 1927, contained 19,119 acres of irrigable land, allotted to 1,092 settlers, including 554 returned soldiers. The pumping plants at present installed or being installed on these areas aggregate 7,653 brake horse-power, with a pumping capacity of over 12 million gallons per hour.

The *Cadell Irrigation Area* is 7 miles by river above Morgan, and comprises 2,727 acres, of which 1,168 are irrigable. Blocks have been allotted to 59 soldier settlers and 6 civilian settlers. The area is suitable for fruit growing. The pumping plant is a 190 b.h.p. steam plant, with a capacity of 4,200 gallons per minute against a head of 75 feet. This area was first allotted on 30th September, 1919.

The *Waikerie Irrigation Area* is 39 miles above Morgan by river, and includes the old Waikerie and Ramco settlements. The total area is 9,290 acres, of which 3,360 acres are irrigable land, growing fruit trees and vines. The area allotted is divided between 201 settlers, 16 of whom are soldiers, the first allotment taking place on 5th July, 1910. The pumping plant consists of five units, four suction gas and one steam unit, with a total of 1,300 b.h.p. The capacity of the plant is 17,000 gallons per minute against a total head of 140 feet.

The *Holder Scheme* adjoins the Waikerie Irrigation Area, and has been incorporated as a portion of the latter. It contains 452 acres of irrigable land, and 1,909 acres of dry land. Blocks have been allotted to 69 settlers, including 16 soldier settlers. An area of 115 acres of the irrigable land has been subdivided into 43 small allotments, of which 42 have been allotted. The pumping plant consists of two steam units, with a total of 238 b.h.p., and a capacity of 3,750 gallons per minute against a total head of 115 feet. An adjoining irrigable area of 110 acres, held by Holder Ltd., is also irrigated by this plant.

The *Kingston Irrigation Area* is situated 75 miles above Morgan by river, and comprises the old village settlement of that name. It has a total area of 3,747 acres, of which 480 acres are irrigable, and has been allotted to 33 settlers, including one returned soldier. The water is pumped by a 130 b.h.p. steam plant with a capacity of 2,000 gallons per minute against a total head of 114 feet.

The *Moorook Irrigation Area*, adjoining the Kingston Area, contains 5,971 acres of land, of which 662 acres are irrigable. Altogether 620 acres of irrigable land have been allotted to 37 settlers, of whom 14 are soldier settlers. The first allotment took place in March, 1916. This area is irrigated by a 430 b.h.p. steam plant of two units, with a capacity of 7,160 gallons per minute against a total head of 120 feet.

The *Cobdogla Irrigation Area* is on the opposite side of the river to Kingston and Moorook Areas. It was formerly a sheep station held under pastoral lease, and was resumed by the Government for irrigation purposes. The total area of the station was 160,000 acres, of which 23,400 acres had been set apart as the Berri Area, and the remaining 136,600 acres as the Cobdogla Area. The latter area includes Lake Bonney, 4,000 acres in extent. This lake is situated 3 miles inland from the Murray from which, now that No. 3 Lock is in operation, it is kept partially filled by Chambers Creek.

The Cobdogla Area contains about 34,500 acres of land capable of being irrigated. It is divided into 5 sections viz., the Cobdogla, Nookamka, Loveday, McIntosh, and Weigall divisions.

The Cobdogla division has been developed as a low-lift area, the pumping head being about 34 feet, to irrigate 1,534 acres of land, suitable for vine and fodder growing. An irrigable area of 1,197 acres has been allotted to 45 settlers, including 6 soldiers.

The Nookamka division, south of Lake Bonney, has an irrigable area of 2,625 acres, of which 2,119 acres have been allotted to 98 soldier and 12 civilian settlers. The first allotment took place on 16th March, 1922.

The Loveday division has an irrigable area of 9,324 acres. The construction work on this area has been completed, and 1,192 acres have been allotted to 64 soldier settlers and 5 civilians. The reticulation is by means of concrete pipe lines, for both mains and branches, instead of open channels.

Pumping plants have been installed to supply water to the Cobdogla, Nookamka and Loveday divisions. On the Cobdogla division a 240 b.h.p. steam plant with a capacity of 16,700 gallons per minute has been installed and is now used as a subsidiary plant. The main water supply is obtained from the two "Humphrey" gas plants installed with a combined capacity of 47,600 gallons per minute. The Nookamka division has two steam units, totalling 640 b.h.p., installed with a combined capacity of 12,500 gallons per minute, which have recently been superseded by a pipe line connecting with the Loveday water mains, which now supply the Nookamka requirements. The Loveday division has a 300 b.h.p. suction gas unit, with a capacity of 6,000 gallons per minute, and two steam units installed, with combined power and output of 1,315 b.h.p., and 33,300 gallons per minute respectively, pumped against a total head of 93 feet.

The *Berri Irrigation Area* is 120 miles above Morgan by river, and contains a total area of 23,400 acres, of which 7,833 acres are suitable for fruit and vine culture. A total of 7,513 acres of irrigable land has been allotted to 420 settlers, of whom 225 are soldier settlers. An area of 80 acres of the irrigable land is used as an experimental farm. The first allotment of the older portion of this area took place in January, 1911. The pumping plant consists of five units, three suction gas and two steam units, with a total of 2,250 b.h.p., and a capacity of 42,500 gallons per minute against total heads varying from 50 feet to 120 feet.

The *Chaffey Irrigation Area* comprises a large area of country adjacent to Renmark. Preliminary survey work has been carried out over 14,000 acres of prospective irrigable land. A portion of this area, known as the Ral Ral Division, containing 1,930 acres, of which 1,682 are irrigable land, has been surveyed into blocks. A total of 1,092 acres, including 1,032 acres of irrigable land, has been allotted to 59 settlers, 55 of whom are soldiers. A pumping plant of 220 b.h.p., with a capacity of 12,500 gallons per minute against a total head of 30 feet has been installed.

The *Irrigation and Reclaimed Swamp Areas* under Government control on the River Murray below Morgan contain 10,617 acres of rateable land, i.e., 953 acres of high irrigable and 9,664 acres of reclaimed swamp land, allotted to 348 settlers, of whom 57 are soldier settlers. The former land is irrigable by pumping, and the latter by gravitation. Pumping plants installed total 1,941 b.h.p., with a capacity of 5½ million gallons per hour.

Mobilong and Burdett Divisions of the Murray Bridge Irrigation Area, adjoining Murray Bridge, contain 578 acres of irrigable reclaimed fodder land with 46 settlers, of whom one is a soldier.

Long Flat and Monteith Flat below Murray Bridge have between them a reclaimed irrigable area of 1,340 acres, all of which has been allotted to 47 settlers, of whom one is a soldier.

Swanport Area below Murray Bridge has 192 acres of fruit and fodder land.

The *Jervois Irrigation Area* is divided into four divisions, i.e.—

Jervois Division is 15 miles below Murray Bridge, and includes 1,199 acres of irrigable reclaimed land, of which 743 acres have been allotted to 18 civilian and 2 soldier settlers.

Woods Point Division is 12 miles below Murray Bridge, and contains 1,101 acres of irrigable reclaimed land, all of which has been allotted to 2 soldier and 28 civilian settlers.

Wellington Division is 18 miles below Murray Bridge, and has an area of about 1,627 acres of irrigable reclaimed land. An area of 391 acres of irrigable land has been allotted to 9 settlers, of whom one is a soldier.

Highland Division has an area of 9,105 acres of dry land suitable for grazing and cultivation purposes. An area of 6,939 acres has been allotted to 48 settlers, of whom 4 are soldiers.

The *Mypolonga Area* is 9 miles above Murray Bridge, and has a river frontage of 7 miles. The total area of this settlement is 5,792 acres, of which 865 are irrigable and 1,360 acres irrigable reclaimed land. A rateable area of 2,077 acres has been allotted to 98 settlers, of whom 14 are soldiers.

The *Pompoota Area,* situated 13 miles above Murray Bridge, was previously used as a Training Farm for prospective soldier settlers. The area contains 2,470 acres, of which 406 acres are irrigable reclaimed land. A rateable area of 342 acres has been allotted to 15 soldier settlers.

The *Wall Area,* 16 miles above Murray Bridge, has an area of 999 acres, of which 454 acres are rateable reclaimed swamp land. Nine soldiers and a civilian are settled on the area.

The *Neeta Irrigation Area* is 20 miles above Murray Bridge, and contains a total of 2,760 acres, of which 525 acres are rateable reclaimed swamp land. A rateable area of 525 acres has been allotted to 5 civilian and 8 soldier settlers.

The *Cowirra Irrigation Area* is 20 miles above Murray Bridge, and contains a total of 2,368 acres, of which 581 acres are rateable reclaimed swamp land. A rateable area of 309 acres has been allotted to 11 civilian settlers.

The *Baseby Area* is about 21 miles above Murray Bridge, and has an area of 1,350 acres. This area has been leased to a civilian settler.

The reclaimed lands consist mainly of peaty soils composed of rich river silt, and are eminently suitable for the growth of lucerne and other fodders, onions, potatoes, etc. The soils of the irrigable lands have already proved their suitability for the production of peaches, apricots, nectarines, oranges, lemons, figs, and grapes.

(iv) *Allotment of Irrigated Land.* All lands are allotted under perpetual lease, and blocks are surveyed into areas varying up to 50 acres of irrigable or reclaimed land. It is not the practice to allot more than 50 acres of irrigable or reclaimed land, or of both irrigable and reclaimed, to any one settler, except that in the case of a partnership 50 acres may be allotted for each member of the partnership up to a maximum of 150 acres.

In addition, areas of non-irrigable land are allotted to lessees of irrigation and reclaimed blocks for dry farming. The rentals of the blocks are fixed by the Irrigation Commission immediately prior to the land being offered for application. For the reclaimed land an amount is charged sufficient to cover interest on cost of the land, the survey thereof, and interest on cost of the levee; while for the irrigable land the rent is based on the unimproved value of Crown lands, or to cover interest on cost of repurchased lands.

On the irrigable land, the present rate is 60s. per acre per annum. On the reclaimed lands an amount is charged to meet the annual management, drainage, maintenance expenses, and certain interest charges, the present rate being 30s. per acre. A sliding scale covers the rent on all land and water rates on the irrigable land for the first four years, i.e., first year, one-quarter of the full rent and water rates; second year, one-half; third, three-quarters; fourth and afterwards, full amount, per acre. On the irrigable lands each lessee is entitled for the water rates to 24 acre-inches per annum, supplied in four irrigations; special irrigations and domestic supplies are available at a nominal cost at times other than during the general irrigation. On the reclaimed lands, water is supplied regularly by reticulation from the river.

Liberal assistance is provided by the Government to lessees of irrigation blocks. Apart from the erection of pumping plants, construction of main channels and other work necessary to render the land ready for occupation, the Irrigation Commission has power to carry out improvements in the nature of clearing, channelling, fencing, etc. The lessee on allotment is required to take over any expenditure so incurred, and to pay an amount of not less than 15 per cent. of the cost of the work. Subsequent to allotment the Commission has power to expend a sum not exceeding £30 per acre of the irrigable land in any lessee's block in making the following improvements, or any of them:—Fencing, clearing, grading, constructing irrigation channels, drains and tanks thereon, and connecting such channels or drains with the nearest main channel or drain. The lessee is required to pay a deposit before the work is commenced equal to not less than 15 per cent. of the Commission's estimate of the cost of carrying out such improvements. The Commission may also make cash advances to any lessee for all or any of the following purposes :—

(a) For carrying out improvements and the erection of buildings to the extent of the estimated value of the lease and improvements already made or in course of being made thereon, but not exceeding £650.

(b) For the purchase of implements, stock, seeds, plants, trees, etc., to any amount not exceeding £200.

(c) For any other purpose that may be approved by the Commission, but not exceeding three-fourths of the estimated value of the lease and any improvements already made thereon.

The total amount that may be expended or advanced, however, for all or any of the above purposes, including improvements carried out by the Commission, shall not exceed in aggregate the sum of £600, or £30 per acre of the irrigable portion of the land, whichever sum is the greater.

All expenditure incurred by the Commission in improving the land either before or after allotment, or advanced to the lessee to carry out further improvements, must be repaid under the following conditions :—For the period of 5 years following the date on which the expenditure was incurred or advances made, the lessee shall pay interest on the amount at current rates. After the expiration of 5 years, the lessee is required to repay the amount expended or advanced by 70 equal half-yearly instalments, together with interest at current rates on the balance remaining unpaid.

6. **Western Australia.**—In this State an Irrigation Act provides for the constitution of irrigation districts. At Harvey, works for irrigating about 4,000 acres devoted to fruit growing, principally oranges, were opened on the 21st June, 1916. A scheme is now in preparation for irrigating a further area in the same district.

Numerous small private irrigation schemes are in full operation on many of the south-west rivers, in connexion with fruit, fodder, and potato growing.

7. **Murray Waters.**—(i) *River Murray Agreement.* The River Murray Agreement, with subsequent amendments, entered into by the Governments of the Commonwealth and the States of New South Wales, Victoria, and South Australia, provides for the construction of the following works :—(a) The Hume reservoir, (b) The Lake Victoria storage, (c) Twenty-six weirs and locks in the River Murray, and (d) Nine weirs and locks in the River Murrumbidgee. In the Agreement provision is made for these works to be undertaken by the Governments of the three States—the Hume Reservoir and 17 weirs and locks between Echuca and Wentworth, including that at Wentworth, to be constructed by the Governments of New South Wales and Victoria severally or jointly, as may be mutually agreed upon by them; the 9 weirs and locks in the River Murrumbidgee to

be constructed by the Government of New South Wales; and the Lake Victoria Storage and 9 weirs and locks in the River Murray below Wentworth by the Government of South Australia.

The River Murray Commission, appointed in pursuance of the Agreement referred to, and comprising a representative of each of the four contracting Governments, is charged with the duty of giving effect to the Agreement and the River Murray Waters Acts.

(ii) *Works.*—(*a*) *General.* The whole of the works which have been put in hand to date, with the exception of the weir and lock at Blanchetown, which work was commenced before the Agreement came into operation, and which was in that Agreement specifically exempted from the provisions thereof, has been constructed, or is being constructed, in accordance with designs approved by the River Murray Commission.

The following are the works which have been put in hand :—

The Hume Reservoir,	By the Governments of New South Wales and Victoria.
Weir and Lock at Torrumbarry (near Echuca),	
Weir and Lock No. 11 (Mildura),	
Weir and Lock No. 10 (Wentworth), a little below the junction of the Rivers Murray and Darling,	
Weir and Lock, No. 15, near Euston,	
The Lake Victoria Storage,	By the Government of South Australia.
Weirs and Locks Nos. 1, 2, 3, 4, 5, 6, and 9,	

(*b*) *The Hume Reservoir.* The site of the Hume Dam, which is being constructed jointly by the Constructing Authorities for New South Wales and Victoria, is located a little below the junction of the Rivers Murray and Mitta Mitta, where the reservoir will receive the run-off from a catchment of 6,000 square miles of mountainous country. The original designs prepared in connexion with this work provided for a reservoir with a capacity of 1,100,000 acre-feet, and the work was put in hand on both sides of the river in accordance with such designs, but with a view to making provision for the greatest possible storage, and in order to enable the Reservoir to be utilized for the purpose of hydro-electric generation the four Contracting Governments, acting on expert advice, later agreed to the construction of the dam of dimensions and height sufficient for a capacity of 2,000,000 acre-feet. The cost of the enlarged reservoir has been estimated at £4,563,100.

The dam, which is in course of construction, will consist of two main sections—(1) the outlets and flood spillway, and (2) the earthen embankment containing a concrete core wall sunk into the solid granite, and provided with a tunnel for drainage and inspection purposes. The first section, which will extend from the New South Wales bank of the river to the Victorian bank, and which will be practically all of concrete, is being constructed by the New South Wales Constructing Authority. The remaining section of the dam, which extends from the Victorian bank of the river to the high ground bordering the river flats, is in course of construction by the Victorian Constructing Authority. The total length of the dam, including both sections above referred to, will be 4,200 feet.

On the New South Wales section of the work the river has been diverted, and the work of placing concrete in the foundations of the main portion of the dam inside the coffer dam is proceeding. On the Victorian side of the river the construction of the earthen embankment and the concrete core wall has advanced considerably during the year. Approval has been given to the designs and estimate of cost, viz., £194,500, for a bridge over the Hume Reservoir near the dam, which work has been put in hand. The total expenditure incurred to date on the whole of the works at the Hume Reservoir amounts to £2,465,000.

(*c*) *Lake Victoria Storage.* The Lake Victoria Storage is situated in the south-west corner of the State of New South Wales. The scheme approved consists of the construction of extensive embankments and channels, the construction of three regulators (the inlet regulator in the Frenchman's Creek, the controlling regulator in the main inlet channel, and the outlet regulator in the Rufus River), and improvements to Frenchman's Creek and Rufus River.

These works, which are now practically completed, will provide for the storage in the lake of 514,000 acre-feet of water for use by the State of South Australia. The expenditure on this work to date amounts to £472,000.

(*d*) *Weirs and Locks.* Seven weirs and locks, viz., Nos. 11 (Mildura) and 26 (Torrumbarry)—Victoria—and Nos. 1, 2, 3, 5, and 9—South Australia— have been completed, and are now in operation. Of the remaining weirs and locks at present in hand, two, Nos. 10 (Wentworth) and 4 (South Australia), are in an advanced stage of construction.

Investigations are proceeding with a view to the location of the sites of the remaining weirs and locks to be constructed in the River Murray above Mildura.

(iii) *Finance.* (*a*) *General.* In the River Murray Agreement of 1914, the estimated total cost of the whole of the works was set down at £4,663,000, Although definite estimates of the cost of those works not yet authorized have not been prepared, it is anticipated that the total ultimate cost of the whole of the works covered by the River Murray Agreement will be in the vicinity of £14,000,000. The total expenditure incurred up to 31st March, 1928, on that portion of the scheme completed and in course of construction amounted to £5,950,000, towards which expenditure the four Contracting Governments in conformity with the amending Agreement previously referred to, have contributed in equal shares.

(*b*) *Programme of Works to be constructed during the period ending 30th June,* 1932. At a recent conference of representatives of the four Contracting Governments, it was decided definitely to limit the programme of works to be constructed during the period ending 1932 to the following works, viz.:—The construction of the Hume Reservoir to provide for a capacity of 2,000,000 acre-feet; the completion of the Lake Victoria Storage; and the completion of all Weirs and Locks from No, 1 (Blanchetown) to No. 11 (Mildura) and Weir and Lock No. 15 (Euston).

The Commission's estimate of expenditure on works, surveys, investigations, etc., during the year 1928–29 is as follows:—

New South Wales—			
Hume Reservoir—			
Construction	£300,000		
Land Resumption	100,000		
Spillway Gates	70,000		
Roads	50,000		
Bethanga Bridge	100,000		
		£620,000	
Weir and Lock No. 10		50,000	
Weir and Lock No. 15		80,000	
Surveys—Investigations		5,800	
			£755,800
Victoria—			
Hume Reservoir—			
Construction	£227,000		
Piers and approaches to Bridge	10,000		
Diversion of Roads	30,000		
Diversion of Railway Line	50,000		
Land Resumptions	180,000		
		£497,000	
Weir and Lock No. 11		2,000	
Surveys and Investigations		1,000	
			£500,000
South Australia—			
Weir and Lock No. 2		£6,500	
Weir and Lock No. 4		80,000	
Weir and Lock No. 6		127,000	
Weir and Lock No. 7		57,000	
Weir and Lock No. 8		3,000	
Lake Victoria Storage		1,500	
			£275,000
Total			£1,530,800

The four Contracting Governments will furnish their respective contributions towards this proposed expenditure as required during the year.

(iv) *Gaugings.* The River Murray Agreement places upon the Commission the duty of carrying on an effective and uniform system of making and recording continuous gaugings of the main stream of the River Murray and its tributaries within the boundaries of each of the States of New South Wales, Victoria, and South Australia, and of all diversions, whether natural or artificial or partly natural and partly artificial, from the main stream and its tributaries. It is further provided that, in lieu of making any such gaugings, the Commission may accept any gaugings made and recorded by any of the Contracting State Governments.

Arrangements have been made with the three Contracting State Governments for the adoption of uniform methods in connexion with all gaugings on the River Murray and its tributaries, and for the submission periodically to the Commission, for purposes of the River Murray Agreement, of the results of such gaugings.

The gaugings made at the Renmark Gauging Station during the year 1926–27 indicated that the total flow of the river at that point was 10,417,208 acre-feet for the year. The total flow at the same station for the preceding year was 7,981,427 acre-feet, the average for all years being about 8,500,000 acre-feet.

The approximate quantity of water diverted from the river by the three States by artificial or partly artificial means for the same year was 1,920,802 acre-feet.

(v) *River Murray Commission.* The River Murray Commission, as at present constituted, is as follows:—

Commonwealth ..	Hon. W. C. Hill, M.P., Minister for Works and Railways (President). Deputy Commissioner—Mr. T. Hill, M.V.I.E.
New South Wales ..	Mr. H. H. Dare, M.E., M. Inst. C.E., M. Inst. E., Aust.
Victoria	Mr. R. Horsfield, M. Inst. C.E.
South Australia ..	Mr. J. H. O. Eaton, M. Inst. C.E., M. Inst. E., Aust. Secretary—Mr. P. A. Gourgaud. Accountant—Mr. H. J. Rowlands, A.F.I.A.

More detailed references to the River Murray Agreement and the operations of the Commission will be found in previous issues of the Year Book (see Official Year Book, No. 19, pages 845–850).

CHAPTER XXIV.

POPULATION.

§ 1. Enumerations and Estimates.

The nature of the early "musters" of the population and the subsequent Census enumerations which have been conducted in Australia were reviewed in Official Year Book, Number 15, pp. 1083-5. This review was accompanied by a tabular statement showing the dates on which the various enumerations were made, and the numbers counted on such occasions.

§ 2. Census of 4th April, 1921.

1. **Numbers Enumerated.**—The Census for the whole of Australia was taken as for the night between the 3rd and the 4th of April, 1921, and was the second Census under the provisions of the Commonwealth Census and Statistics Act 1905-20, which provides for the enumeration being dealt with from one centre, instead of each State being responsible for its own count as on previous occasions. The numbers recorded in the several States and Territories were as follows :—

POPULATION.—4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

States and Territories.	Males.	Females.	Persons.
States—			
New South Wales ..	1,071,501	1,028,870	2,100,371
Victoria	754,724	776,556	1,531,280
Queensland	398,969	357,003	755,972
South Australia ..	248,267	246,893	495,160
Western Australia ..	177,278	155,454	332,732
Tasmania	107,743	106,037	213,780
Territories—			
Northern	2,821	1,046	3,867
Federal Capital	1,567	1,005	2,572
Australia	2,762,870	2,672,864	5,435,734

2. **Increase since Census of 1881.**—(i) *Australia.*—The increase of population between the Census of 3rd April, 1911, and that of 4th April, 1921, was 980,729, of which 449,835 were males and 530,894 were females, as compared with an increase of 681,204, comprising 335,107 males and 346,097 females, for the preceding ten years. The population of each sex enumerated at the Censuses of 3rd April, 1881, 5th April, 1891, 31st March, 1901, 3rd April, 1911, and 4th April, 1921, was as follows :—

POPULATION.—AUSTRALIA, LAST FIVE CENSUSES.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

Date of Census.	Males.	Females.	Persons.	(*a*) Masculinity.
3rd April, 1881	1,214,913	1,035,281	2,250,194	7.98
5th April, 1891	1,704,039	1,470,353	3,174,392	7.36
31st March, 1901.. ..	1,977,928	1,795,873	3,773,801	4.83
3rd April, 1911	2,313,035	2,141,970	4,455,005	3.84
4th April, 1921	2,762,870	2,672,864	5,435,734	1.66

(*a*) Excess of males over females per 100 persons.

(ii) *States and Territories.* The increases in the population of the several States and Territories during the past four intercensal periods have been as follow :—

POPULATION.—STATES, ETC., INTERCENSAL INCREASES.

State or Territory.	1881–1891.		1891–1901.		1901–1911.		1911–1921.	
	Numerical.	Per cent.	Numerical.	Per cent.	Numerical.	Per cent.	Numerical.	Per cent.
N.S. Wales ..	(*a*)374,129	49.90	(*a*)230,892	20.54	(*a*)293,602	21.67	453,637	27.55
Victoria ..	278,274	32.30	61,230	5.37	114,481	9.53	215,729	16.40
Queensland ..	180,193	84.39	104,411	26.52	107,684	21.62	150,159	24.79
South Australia	39,119	14.15	42,813	13.57	50,212	14.01	86,602	21.20
Western Australia	20,074	67.57	134,342	269.86	97,990	53.22	50,618	17.94
Tasmania ..	30,962	26.76	25,808	17.60	18,736	10.86	22,569	11.80
N. Territory ..	1,447	41.93	(*b*)–87	(*b*)–1.78	(*b*)–1,501	(*b*)–31.20	557	16.83
Fed. Cap. Ter. ..	..	..	..	..	..	..	858	50.06
Australia ..	924,198	41.07	599,409	18.88	681,204	18.05	980,729	22.01

(*a*) Including Federal Capital Territory. (*b*) Decrease.

For Australia as a whole, the increase during the period 1911–1921 was greater by 299,525 than that for the period 1901–1911, the rate of increase being 22.01 per cent. for 1911–1921, as against 18.05 for 1901–1911. During the earlier period the increase corresponds to 1.67 per cent. per annum, and in the latter, to 2.01 per cent. per annum.

As regards the separate States, both the numerical and relative increases in the case of New South Wales, Victoria, Queensland, South Australia, and Tasmania were greater for 1911–1921 than for 1901–1911. On the other hand, Western Australia experienced a smaller increase during the decade 1911–1921 than in either of the two immediately preceding decades. The Northern Territory showed during the period 1911–1921 its first increase in population since the decade 1881–1891.

§ 3. Distribution and Fluctuation of Population.

1. Present Number.—The population of Australia on the 31st December, 1927, was estimated at 6,234,854 persons, of whom 3,189,823, or 51.16 per cent., were males and 3,045,031, or 48.84 per cent., were females. The increase during the year 1927 was 124,340, equal to 2.03 per cent., males having increased by 67,242, or 2.15 per cent., and females by 57,098, or 1.91 per cent. Of the increase referred to, 75,416, or 60.65 per cent., was due to the excess of births over deaths, and 48,924, or 39.35 per cent., was due to the excess of immigration over emigration.

2. **Growth and Distribution.**—The following tables show the population of the States at decennial intervals from their foundation to the year 1920, and for each of the last four years. In issues of the Year Book up to No. 15, the male and female populations of Australia as a whole were given at quinquennial periods from 1788, but it is considered that the abridged table presented herewith will suffice for general purposes.

POPULATION.—1788 TO 1927.

Year.	Estimated Population at end of Year.								
	States.						Territories.		Australia.
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern	Federal Capital.	
					MALES.				
(a) 1800	3,780	..	..	..	..	..	..	..	3,780
1810	7,585	..	..	..	..	..	..	..	7,585
1820	23,784	..	..	..	..	..	..	..	23,784
1830	33,900	..	..	..	877	(b)18,108	..	..	52,885
1840	85,560	..	..	8,272	1,434	32,040	..	..	127,306
1850	154,976	..	..	35,902	3,576	44,229	..	..	238,683
1860	197,851	(b)330,302	(b)16,817	64,340	9,597	49,653	..	..	668,560
1870	272,121	397,230	69,221	94,894	15,511	53,517	..	..	902,494
1880	404,952	450,558	124,013	147,438	16,985	60,568	..	..	1,204,514
1890	602,704	595,519	223,252	166,049	28,854	76,453	..	..	1,692,831
1900	716,047	601,773	274,684	180,349	110,088	89,763	(c) 4,288	..	1,976,992
1910	858,181	646,482	325,513	206,557	157,971	98,866	2,738	..	2,296,308
1920	1,067,945	753,803	396,555	245,300	176,895	107,259	2,911	(b)1,062	2,751,730
1924	1,150,759	824,182	440,115	273,701	195,341	108,569	2,538	1,643	2,996,848
1925	1,171,590	838,693	454,819	282,790	199,596	108,047	2,550	2,230	3,060,315
1926	1,196,559	852,399	465,644	292,846	203,210	106,330	2,773	2,820	3,122,581
1927	1,223,976	867,409	475,147	298,262	211,628	107,036	3,137	3,228	3,189,823
					FEMALES.				
(a) 1800	1,437	..	..	..	..	..	..	..	1,437
1810	3,981	..	..	..	..	..	..	..	3,981
1820	9,759	..	..	..	..	..	..	..	9,759
1830	10,688	..	..	..	295	(b)6,171	..	..	17,154
1840	41,908	..	..	6,358	877	13,959	..	..	63,102
1850	111,924	..	..	27,798	2,310	24,641	..	..	166,673
1860	150,695	(b)207,932	(b)11,239	61,242	5,749	40,168	..	..	477,025
1870	225,871	326,695	46,051	89,652	9,624	47,369	..	..	745,262
1880	336,190	408,047	87,027	128,955	12,576	54,222	..	..	1,027,017
1890	510,571	538,209	168,864	152,898	19,648	68,334	..	..	1,458,524
1900	644,258	594,440	219,163	176,901	69,879	83,137	(c) 569	..	1,788,347
1910	785,674	654,926	273,503	200,311	118,861	94,937	563	..	2,128,775
1920	1,023,777	774,106	354,069	245,706	154,428	105,493	1,078	(b) 910	2,659,567
1924	1,103,691	832,913	394,779	264,805	168,783	109,270	1,059	1,355	2,876,655
1925	1,126,852	845,324	406,366	268,843	172,587	108,985	1,106	1,706	2,931,769
1926	1,151,222	859,428	416,549	273,548	175,536	108,424	1,125	2,101	2,987,933
1927	1,176,290	873,981	424,029	277,509	180,664	108,826	1,224	2,508	3,045,031
					PERSONS.				
1788	859	..	..	..	..	..	..	..	859
1790	2,056	..	..	..	..	..	..	..	2,056
1800	5,217	..	..	..	..	..	..	..	5,217
1810	11,566	..	..	..	..	..	..	..	11,566
1820	33,543	..	..	..	..	..	..	..	33,543
1830	44,588	..	..	..	1,172	(b)24,279	..	..	70,039
1840	127,468	..	..	14,630	2,311	45,999	..	..	190,408
1850	266,900	..	..	63,700	5,886	68,870	..	..	405,356
1860	348,546	(b)538,234	(b) 28,056	125,582	15,346	89,821	..	..	1,145,585
1870	497,992	723,925	115,272	184,546	25,135	100,886	..	..	1,647,756
1880	741,142	858,605	211,040	276,393	29,561	114,790	..	..	2,231,531
1890	1,113,275	1,133,728	392,116	318,947	48,502	144,787	..	..	3,151,355
1900	1,360,305	1,196,213	493,847	357,250	179,967	172,900	(c) 4,857	..	3,765,339
1910	1,643,855	1,301,408	599,016	406,868	276,832	193,803	3,301	..	4,425,083
1920	2,091,722	1,527,909	750,624	491,006	331,323	212,752	3,989	(b)1,972	5,411,297
1924	2,254,450	1,657,095	834,894	538,506	364,124	217,839	3,597	2,998	5,873,503
1925	2,298,442	1,684,017	861,185	551,633	372,183	217,032	3,656	3,936	5,992,084
1926	2,347,781	1,711,827	882,193	566,394	378,746	214,754	3,898	4,921	6,110,514
1927	2,400,266	1,741,390	899,176	575,771	392,292	215,862	4,361	5,736	6,234,854

(a) Details as to sex not available for earlier decennial dates. (b) Previously included with New South Wales. (c) Previously included with South Australia.

So far as the numbers can be ascertained, the nucleus of the population of Australia consisted of 1,024 persons, including the military, who landed in Sydney Cove on the 26th January, 1788. For many years the number increased very slowly, and in 1825, when Tasmania (then known as Van Diemen's Land) was separated from New South Wales and constituted a separate colony, *i.e.*, 37 years after the first settlement, the total population was only 52,505 persons, of whom 38,313 were in New South Wales, and 14,192 were in Tasmania. The total for Australia attained its first million in 1858, 70 years after settlement. At this time the population was distributed among the States, or Colonies as they were then, as follows :—New South Wales, 31.97 per cent. ; Victoria, 47.22 per cent. ; Western Australia, 1.38 per cent. ; South Australia, 11.29 per cent. ; and Tasmania, 8.14 per cent. The second million was reached in 1877, after a lapse of nineteen years, by an average rate of increase of 3.53 per cent. per annum. The third million was reached twelve years later, in 1889, by an annual rate of increase of 3.48 per cent. ; the fourth million sixteen years later, in 1905, at the rate of increase of 1.74 per cent. per annum ; the fifth million thirteen years later in 1918, by an annual average rate of 1.79 per cent. ; and the sixth million eight years later in 1926 by an annual average rate of 2.31 per cent.

The growth of the population of Australia and of each State thereof, is illustrated by the graphs accompanying this chapter.

3. Mean Population.—The following table shows the mean population for each State and Territory for the five years 1923 to 1927.

MEAN POPULATION, EXCLUSIVE OF FULL-BLOOD ABORIGINALS.

Year.	States.						Territories.		Australia.
	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Northern.	Fed. Cap.	
1923 ..	2,190,410	1,607,773	802,748	517,445	348,275	215,327	3,610	3,315	5,688,903
1924 ..	2,228,337	1,641,852	825,151	529,691	359,521	214,687	3,603	3,848	5,806,690
1925 ..	2,274,247	1,671,467	851,419	543,986	368,194	213,469	3,681	4,721	5,931,184
1926 ..	2,320,288	1,696,670	875,187	558,883	374,996	211,216	3,765	6,106	6,047,111
1927 ..	2,372,643	1,727,413	891,908	571,098	385,011	209,994	4,234	7,342	6,169,643

4. Increase at Decennial Periods since 1790.—The following table furnishes particulars relative to the increase in population of Australia during each decade, and the percentage of such increase on the population at the commencement of the decade :—

POPULATION.—AUSTRALIA, DECENNIAL INCREASE.

Decade ended 31st December—	Increase during Decade—					
	Numerical.			Percentage.		
	Males.	Females.	Persons.	Males.	Females.	Persons.
				%	%	%
1790	(*a*)	(*a*)	2,056	..	..	..
1800	(*a*)	(*a*)	3,161	(*a*)	(*a*)	153.75
1810	3,805	2,544	6,349	100.66	177.04	121.70
1820	16,199	5,778	21,977	213.57	145.14	190.01
1830	29,101	7,395	36,496	122.36	75.78	108.80
1840	74,421	45,948	120,369	140.72	267.86	171.86
1850	111,377	103,571	214,948	87.49	164.13	112.89
1860	429,877	310,352	740,229	180.10	186.20	182.61
1870	233,934	268,237	502,171	34.99	56.23	43.84
1880	302,020	281,755	583,775	33.47	37.81	35.43
1890	488,317	431,507	919,824	40.54	42.02	41.22
1900	284,161	329,823	613,984	16.79	22.61	19.48
1910	319,316	340,428	659,744	16.15	19.04	17.52
1920	455,422	530,792	986,214	19.83	24.93	22.29

(*a*) Not available.

5. Area, Population, Masculinity, and Density—States, 1927.—A previous table showed the estimated number of persons on the 31st December, 1927, in each of the States and Territories. In the following table the proportions of the total area, and of the total population represented by each State or Territory, are given, together with the masculinity and the density of population :—

AREA, POPULATION, MASCULINITY, AND DENSITY.—STATES, 1927.

State or Territory.	Percentage on Total Area.	Per cent. Estimated Population 31st December, 1927. Males.	Females.	Persons.	Masculinity.(a)	Density. (b)
New South Wales ..	10.40	38.37	38.64	38.50	1.99	7.76
Victoria	2.96	27.19	28.70	27.93	—0.38	19.81
Queensland	22.54	14.89	13.93	14.43	5.68	1.34
South Australia	12.78	9.36	9.11	9.23	3.60	1.51
Western Australia ..	32.81	6.63	5.93	6.29	7.89	0.40
Tasmania	0.88	3.36	3.57	3.46	—0.83	8.23
Northern Territory ..	17.60	0.10	0.04	0.07	43.87	0.01
Federal Capital Territory ..	0.03	0.10	0.08	0.09	12.55	6.10
Australia	100.00	100.00	100.00	100.00	2.32	2.10

(a) Excess of males over females in each 100 persons. (b) Number of persons per square mile.
NOTE.—The minus sign (—) indicates excess of females over males in each 100 persons.

6. **Urban and Rural Distribution.**—The following table shows the number of persons and the percentage on the total population recorded at the Census of the 4th April, 1921, as resident in urban and rural areas respectively. The metropolitan divisions include the capital city and the adjoining urban areas ; the urban provincial districts cover those cities and towns which are not adjacent to the metropolitan areas, and which are incorporated for local government purposes ; while those persons classed as migratory were mostly on board ships in Australian ports :—

URBAN AND RURAL POPULATION.—AUSTRALIA, CENSUS, 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

Particulars.	States. New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Territories. Northern.	Federal Capital.	Australia.
					NUMBER.				
Urban—									
Metropolitan	899,059	766,465	209,946	255,375	154,873	52,361	..	..	2,338,079
Provincial	525,007	187,490	183,720	41,637	42,571	55,644	1,399	..	1,037,468
Rural ..	664,590	571,577	359,014	195,054	130,098	105,123	2,403	2,563	2,030,422
Migratory ..	11,715	5,748	3,292	3,094	5,190	652	65	9	29,765
Total ..	2,100,371	1,531,280	755,972	495,160	332,732	213,780	3,867	2,572	5,435,734
					PERCENTAGE ON TOTAL.				
Urban—									
Metropolitan	42.80	50.05	27.77	51.57	46.55	24.49	..	..	43.01
Provincial..	25.00	12.24	24.30	8.41	12.79	26.03	36.18	..	19.09
Rural ..	31.64	37.33	47.49	39.39	39.10	49.17	62.14	99.65	37.35
Migratory ..	0.56	0.38	0.44	0.63	1.56	0.31	1.68	0.35	0.55
Total ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

For Australia as a whole 62.10 per cent. of the population is urban, this percentage being exceeded by New South Wales, 67.80 per cent., and Victoria 62.29 per cent. Tasmania, with 50.52 per cent., has the smallest percentage of urban population in all the States.

During the ten years between the Censuses of 1911 and of 1921 the population of the metropolitan areas in the aggregate increased in proportion to the total population of Australia from 38.03 per cent. in 1911 to 43.01 per cent. in 1921. This movement was common to all the States, though in varying degree. The relative accretion to the metropolitan total was greatest in Western Australia, where it increased from 37.85 per cent. to 46.55 per cent. of the population of the State, and was least in New South Wales, where it increased from 38.23 per cent. to 42.80 per cent. The abnormal increase in the proportion of the metropolitan population to the total population of Western Australia is not due entirely to the actual increase to the population of Perth and suburbs, but is caused in some measure by the departure from the State of many persons who had been engaged in connexion with the mining industry in extra-metropolitan districts.

In Victoria and in South Australia more than half the population lives within the metropolitan areas. At the Census of 1921, 50.05 per cent. of the population of Victoria, and 51.57 per cent. of the population of South Australia, were resident in their respective capitals. Of the total population of Australia, 43.01 per cent. was in the metropolitan areas, the proportion of the total males being 40.35 per cent., and of the females 45.77 per cent. The post-censal estimates, which are given in the following table, show a higher proportion in each of the capitals than was shown by the Census.

7. Metropolitan Population—Australia and Other Countries.—The abnormal concentration of population in the capitals of the States of Australia, as compared with other countries, may be readily seen from the following table. It may be mentioned, however, that, in most of the European countries, the capital is not always the most populous of many big cities, whereas, in Australia, the capital is invariably the most populous city, and in some States is the only town of important magnitude.

METROPOLITAN POPULATION.—AUSTRALIA AND OTHER COUNTRIES.

State or Country.	Metropolis.	Year.	Population.	Percentage on total of State or Country.
				%
New South Wales ..	Sydney	31st Dec., 1927	1,101,190	45.88
Victoria	Melbourne		975,160	55.98
Queensland ..	Brisbane		295,430	32.86
South Australia ..	Adelaide		327,686	56.91
Western Australia ..	Perth		191,791	49.00
Tasmania	Hobart		56,193	26.03
Australia	(6 Cities)		2,947,450	47.35
New Zealand ..	Wellington ..	1.4.1928	127,265	9.17
New York State ..	New York	1927	5,970,782	52.07
Northern Ireland ..	Belfast	1927	415,000	33.11
Austria	Vienna	1923	1,865,780	28.56
Denmark	Copenhagen ..	1925	731,496	21.30
Hungary	Budapest	1921	1,217,325	14.91
Irish Free State ..	Dublin	1927	422,400	14.17
Saxony	Dresden	1925	679,159	13.60
England	London (*a*) ..	1927	4,541,000	11.51
Belgium	Brussels	1926	808,664	10.27
Norway	Oslo	1920	258,483	9.75
Netherlands ..	Amsterdam ..	1926	726,527	9.65
Bavaria	Munich	1925	680,704	9.22
Scotland	Edinburgh	1927	426,300	8.71
Sweden	Stockholm	1926	453,332	7.46
Portugal	Lisbon	1921	435,359	7.31
France	Paris	1926	2,871,429	7.05
Germany	Berlin	1925	4,013,588	6.36
Greece	Athens	1923	385,026	6.21
Finland	Helsingfors ..	1926	215,829	6.07
Spain	Madrid	1926	1,151,112	5.16
Czecho-Slovakia ..	Prague	1921	676,657	4.98
Poland	Warsaw	1921	936,713	3.44
Japan	Tokio	1925	1,995,567	3.34
Switzerland ..	Berne	1925	107,960	2.71
Italy	Rome	1927	875,119	2.17
Russia (European) ..	Leningrad	1926	1,611,102	1.15
United States ..	Washington ..	1927	540,000	0.46

(*a*) Population of Greater London in 1927 was 7,796,353.

8. Principal Urban Centres.—The following table gives particulars of the population of the principal urban incorporated areas in each State at the 31st December, 1927 :—

POPULATION OF PRINCIPAL URBAN INCORPORATED AREAS.—AUSTRALIA, 31st DECEMBER, 1927.

Town.	Population.
New South Wales—	
Sydney and Suburbs	1,101,190
Newcastle and Suburbs	102,550
Broken Hill	23,430
Bankstown	18,850
Auburn	18,530
Granville	17,530
Lithgow	16,840
Parramatta	16,760
Lidcombe	14,310
Cessnock	13,340
Holroyd	13,040
Goulburn	12,140
Katoomba	10,120
Lismore	9,380
West Maitland	9,080
Bathurst	9,060
Wagga Wagga	8,790
Albury	8,750
Orange	8,160
Wollongong	8,000
Tamworth	7,260
Fairfield	7,220
Illawarra North	7,040
Liverpool	5,980
Illawarra Central	5,940
Armidale	5,850
Dubbo	5,560
Parkes	5,400
Dundas	5,100
Victoria—	
Melbourne and Suburbs	975,160
Geelong and Suburbs	42,300
Ballarat and Suburbs	41,910
Bendigo and Suburbs	33,910
Mordialloc	9,110
Warrnambool	8,070
Castlemaine and Suburbs	7,170
Carrum	7,000
Wonthaggi	6,900
Mildura	6,000
Hamilton	5,280
Ararat	5,100
Shepparton	5,000
Maryborough	4,900
Stawell	4,700
Horsham	4,650
Colac	4,550
Dandenong	4,300
Echuca	4,050
Wangaratta	4,000
Camperdown	3,900
Queensland—	
Brisbane and Suburbs	295,430
Townsville	30,200
Rockhampton	30,000
Queensland—*continued.*	
Toowoomba	24,500
Ipswich	23,000
Maryborough	12,000
Bundaberg	11,000
Gympie	9,570
Cairns	9,500
Charters Towers	9,009
Mackay	8,623
Warwick	7,000
Southport	5,500
Mount Morgan	5,000
Roma	4,000
South Australia—	
Adelaide and Suburbs	327,686
Port Pirie	9,720
Mount Gambier	3,997
Victor Harbour	3,370
Wallaroo	3,197
Peterborough	3,009
Kadina	2,438
Burra	1,827
Gawler	1,753
Kapunda	1,535
Port Augusta	1,371
Jamestown	1,368
Moonta	1,301
Western Australia—	
Perth and Suburbs	191,791
Boulder	5,884
Bunbury	5,570
Kalgoorlie	5,200
Northam	5,000
Geraldton	4,400
Albany	3,980
Collie	3,700
Narrogin	2,700
York	1,600
Tasmania—	
Hobart and Suburbs	56,193
Launceston and Suburbs	28,406
Devonport	4,920
Burnie	4,090
Ulverstone	2,870
Queenstown	2,800
New Norfolk	2,350
Latrobe	1,900
Zeehan	1,900
Wynyard	1,670
Deloraine	1,430

§ 4. Elements of Increase.

1. Natural Increase.—(i) *General.* The two factors which contribute to the growth of a population are the " natural increase " by excess of births over deaths, and the " net immigration," *i.e.*, the excess of arrivals over departures. While the relative potency of these factors depends upon a variety of causes, it may be said that, in general, in the case of a new country " net immigration " provides an important part of the increase of population, while in an old country " natural increase," modified more or less by " net emigration," or excess of departures over arrivals, is the principal element of increase. A graph showing the natural increase to the population of each State and of Australia, from year to year since 1861, accompanies this chapter.

POPULATION.—NATURAL INCREASE (*a*), 1861 TO 1927.

Period.	States.						Territories.		Australia.
	N.S.W. (*b*)	Victoria.	Q'land.	S. Aust. (*c*)	W. Aust.	Tas.	Northern. (*d*)	Fed. Cap. (*e*)	
				MALES.					
1861 to 1870	47,905	69,283	8,183	20,526	1,519	7,174	..	..	154,590
1871 to 1880	64,107	67,117	14,664	23,655	1,733	6,549	..	..	177,825
1881 to 1890	97,411	73,142	25,858	33,488	2,757	11,377	..	..	244,033
1891 to 1900	105,526	79,251	38,249	28,320	4,838	13,262	..	..	269,446
1901 to 1910	115,306	73,280	38,043	26,649	19,045	16,658	−487	..	288,494
1911 to 1920	149,100	87,548	54,391	35,086	22,517	18,059	−326	153	366,528
1921 ..	16,515	9,626	6,241	3,467	1,779	1,778	− 31	12	39,387
1922 ..	17,204	10,551	5,891	3,613	2,169	1,911	− 14	12	41,337
1923 ..	15,744	9,430	5,464	3,249	2,107	1,748	5	− 4	37,743
1924 ..	15,463	9,637	5,610	3,297	2,176	1,523	− 13	4	37,697
1925 ..	15,934	10,010	5,735	3,095	2,053	1,583	− 15	13	38,408
1926 ..	14,547	9,438	5,110	3,230	2,175	1,544	− 17	8	36,035
1927 ..	14,825	9,086	5,351	3,092	2,251	1,441	− 37	13	36,022
1861 to 1927	689,587	517,399	218,790	190,767	67,119	84,607	−935	211	1,767,545
				FEMALES.					
1861 to 1870	56,670	80,534	11,137	21,210	2,406	9,059	..	..	181,016
1871 to 1880	75,843	79,023	21,997	25,552	2,840	8,891	..	..	214,146
1881 to 1890	112,294	87,964	39,500	35,353	4,347	13,592	..	..	293,050
1891 to 1900	121,037	93,664	49,794	30,235	10,430	14,499	..	..	319,659
1901 to 1910	130,460	82,460	48,958	27,455	24,822	16,549	61	..	330,765
1911 to 1920	168,873	93,144	65,736	36,143	29,447	18,425	197	150	412,115
1921 ..	18,095	9,800	6,946	3,525	2,548	1,780	30	11	42,735
1922 ..	18,800	10,582	6,944	3,780	2,795	1,909	24	14	44,848
1923 ..	17,277	9,228	6,625	3,482	2,817	1,772	29	13	41,243
1924 ..	17,407	10,000	6,771	3,425	2,862	1,737	26	22	42,250
1925 ..	17,859	10,075	7,003	3,383	2,817	1,639	18	22	42,816
1926 ..	16,410	9,589	6,440	3,376	2,776	1,532	26	26	40,175
1927 ..	16,265	9,215	6,404	3,272	2,838	1,359	29	12	39,394
1861 to 1927	787,290	585,278	284,255	200,191	93,745	92,743	440	270	2,014,212
				PERSONS.					
1861 to 1870	104,575	149,817	19,320	41,736	3,925	16,233	..	..	335,606
1871 to 1880	139,950	146,140	36,661	49,207	4,573	15,440	..	..	391,971
1881 to 1890	209,705	161,106	65,358	68,841	7,104	24,969	..	..	537,083
1891 to 1900	226,563	172,915	88,043	58,555	15,268	27,761	..	..	589,105
1901 to 1910	245,766	155,740	87,001	54,104	43,867	33,207	−426	..	619,259
1911 to 1920	317,973	180,692	120,127	71,229	51,964	36,484	−129	303	778,643
1921 ..	34,610	19,426	13,187	6,992	4,327	3,558	− 1	23	82,122
1922 ..	36,004	21,133	12,835	7,393	4,964	3,820	10	26	86,185
1923 ..	33,021	18,658	12,089	6,731	4,924	3,520	34	9	78,986
1924 ..	32,870	19,637	12,381	6,722	5,038	3,260	13	26	79,947
1925 ..	33,793	20,085	12,738	6,478	4,870	3,222	3	35	81,224
1926 ..	30,957	19,027	11,550	6,606	4,951	3,076	9	34	76,210
1927 ..	31,090	18,301	11,755	6,364	5,089	2,800	− 8	25	75,416
1861 to 1927	1,476,877	1,102,677	503,045	390,958	160,864	177,350	−495	481	3,811,757

(*a*) Excess of births over deaths. (*b*) Including Federal Capital Territory prior to 1911.
(*c*) Including Northern Territory prior to 1901. (*d*) Included in South Australia prior to 1901.
(*e*) Part of New South Wales prior to 1911.

NOTE.—Minus sign (−) denotes excess of deaths over births.

In the natural increase, females have exceeded the males during the period under review. This is due to the higher death rate among males, the effect of which is augmented by the larger number of males subject to the greater risk of death. Although males predominate in both births and deaths, they exceed the females to a greater degree in the deaths than in the births.

(ii) *Comparison with other Countries.*—Notwithstanding its comparatively low birth-rate, Australia has a high rate of natural increase, owing to the fact that its death-rate is very low. The following table gives a comparison between the average rates per annum of natural increase for some of the principal countries of the world for which such information is available, and those for the several States of Australia and the Dominion of New Zealand :—

NATURAL INCREASE PER ANNUM PER 1,000 OF MEAN POPULATION.

(VARIOUS COUNTRIES.)

Country.	Natural Increase per 1,000.
Australasia (1923–27)—	
Tasmania	14.9
Queensland	14.3
New South Wales	14.2
Western Australia	13.5
Australia	13.2
New Zealand	12.6
South Australia	12.1
Victoria	11.5
Europe—	
Soviet Republics	(*b*) 18.9
Netherlands	(*d*) 15.3
Italy	(*c*) 11.4
Norway	(*d*) 11.1
Denmark	(*d*) 11.0
Finland	(*d*) 9.7
Spain	(*d*) 9.7
Prussia	(*d*) 8.9
Germany	(*d*) 8.8
Scotland	(*c*) 7.9
Northern Ireland	(*e*) 7.4
Belgium	(*d*) 7.1
Europe—*continued.*	
Switzerland	(*d*) 7.0
England and Wales	(*c*) 6.3
Sweden	(*e*) 6.3
Austria	(*d*) 6.2
Irish Free State	(*e*) 6.0
France	(*e*) 1.7
Asia—	
Japan	(*d*) 12.7
Ceylon	(*e*) 12.7
Africa—	
Union of South Africa (whites only)	(*d*) 17.4
America—	
Quebec (Canada)	(*e*) 20.0
Uruguay	(*d*) 14.7
Canada (excluding Quebec)	(*e*) 13.2
Ontario (Canada)	(*e*) 11.7
United States..	(*a*) 11.1
Chile	(*d*) 8.8

(*a*) 1919–23. (*b*) 1923–25. (*c*) 1923–27. (*d*) 1921–25. (*e*) 1922-26.

Graphs of natural increase for each of the States, as well as for Australia, accompany this chapter.

2. **Net Immigration.***—The other factor of increase in the population, viz., the excess of arrivals over departures, known as "net immigration" is, from its nature, much more subject to variations than is the factor of "natural increase." These variations are due to numerous causes, some of which are referred to later in this chapter, in dealing with the influences which affect the growth of population.

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* The subject of immigration is dealt with at some length later in this chapter.

POPULATION.—INCREASE BY NET IMMIGRATION, 1861 TO 1927.

Period.	States.						Territories.		Australia
	N.S.W. (*d*)	Victoria.	Q'land.	S. Aust. (*a*)	W. Aust.	Tas.	Northern. (*b*)	Fed. Cap. (*c*)	
				MALES.					
1861 to 1870	26,365	— 2,355	44,221	10,028	4,395	— 3,310	..	..	79,344
1871 to 1880	68,724	— 13,789	40,128	28,889	— 259	502	..	..	124,195
1881 to 1890	100,341	71,819	73,381	— 14,877	9,112	4,508	..	..	244,284
1891 to 1900	7,817	— 72,997	13,183	— 9,732	76,396	48	..	..	14,715
1901 to 1910	26,828	— 28,571	12,786	— 441	28,838	— 7,555	— 1,063	..	30,822
1911 to 1920	61,633	19,773	16,651	3,657	— 3,593	— 9,666	499	— 60	88,894
1921 ..	— 61	1,476	2,111	3,377	— 174	989	— 162	54	7,610
1922 ..	6,092	13,170	5,004	1,718	2,717	— 2,443	— 164	303	26,397
1923 ..	3,756	8,490	7,046	4,616	3,936	— 1,696	— 18	— 32	26,098
1924 ..	8,101	7,999	6,193	5,064	3,736	— 2,500	24	232	28,849
1925 ..	4,897	4,501	8,969	5,994	2,202	— 2,105	27	574	25,059
1926 ..	10,422	4,268	5,715	6,826	1,439	— 3,261	240	582	26,231
1927 ..	12,592	5,924	4,152	2,324	6,167	— 735	401	395	31,220
1861 to 1927	337,507	19,708	239,540	47,443	134,912	— 27,224	— 216	2,048	753,718
				FEMALES.					
1861 to 1870	18,506	38,229	23,675	7,200	1,469	— 1,858	..	..	87,221
1871 to 1880	34,476	2,329	18,979	13,751	112	— 2,038	..	..	67,609
1881 to 1890	62,087	42,198	42,337	— 11,410	2,725	520	..	..	138,457
1891 to 1900	12,650	— 37,433	505	— 5,663	39,801	304	..	..	10,164
1900 to 1910	10,956	— 21,974	5,382	— 4,045	24,160	— 4,749	— 67	..	9,663
1911 to 1920	69,906	26,036	14,830	9,252	6,120	— 7,869	318	84	118,677
1921 ..	1,645	1,875	2,309	1,036	239	1,017	— 92	15	8,044
1922 ..	2,920	5,236	2,220	1,672	212	— 769	— 29	164	11,626
1923 ..	— 264	8,007	3,743	207	1,347	— 1,674	— 12	88	11,442
1924 ..	4,034	4,079	5,152	1,972	1,535	— 1,995	5	118	14,900
1925 ..	5,302	2,336	4,584	655	987	— 1,924	29	329	12,298
1926 ..	7,960	4,515	3,743	1,329	173	— 2,093	— 7	369	15,989
1927 ..	8,803	5,338	1,076	689	2,290	— 957	70	395	17,704
1861 to 1927	238,981	80,771	128,535	16,645	81,170	— 24,085	215	1,562	523,794
				PERSONS.					
1861 to 1870	44,871	35,874	67,896	17,228	5,864	— 5,168	..	..	166,565
1871 to 1880	103,200	— 11,460	59,107	42,640	— 147	— 1,536	..	..	191,804
1881 to 1890	162,428	114,017	115,718	— 26,287	11,837	5,028	..	..	382,741
1891 to 1900	20,467	— 110,430	13,688	— 15,395	116,197	352	..	..	24,879
1901 to 1910	37,784	— 50,545	18,168	— 4,486	52,998	— 12,304	— 1,130	..	40,485
1911 to 1920	131,539	45,809	31,481	12,909	2,527	— 17,535	817	24	207,571
1921 ..	1,584	3,351	4,420	4,413	65	2,006	— 254	69	15,654
1922 ..	9,012	18,406	7,224	3,390	2,929	— 3,212	— 193	467	38,023
1923 ..	3,492	16,497	10,789	4,823	5,283	— 3,370	— 30	56	37,540
1924 ..	12,135	12,078	11,345	7,036	5,271	— 4,495	29	350	43,749
1925 ..	10,199	6,837	13,553	6,649	3,189	— 4,029	56	903	37,357
1926 ..	18,382	8,783	9,458	8,155	1,612	— 5,354	233	951	42,220
1927 ..	21,395	11,262	5,228	3,013	8,457	— 1,692	471	790	48,924
1861 to 1927	576,488	100,479	368,075	64,088	216,082	— 51,309	— 1	3,610	1,277,512

(*a*) Including Northern Territory up to 1900. (*b*) Included in South Australia up to 1900. (*c*) Part of New South Wales prior to 1911. (*d*) Including Federal Capital Territory prior to 1911.

NOTE.—Minus sign (—) indicates the excess of departures over arrivals.

From 1861 to 1927 the increment to the population arising from the excess of births over deaths amounted to 3,811,757, or 74.90 per cent. of the total increase, while the increase from net immigration amounted to 1,277,512 or 25.10 per cent. During the 27 years of the present century the total increase to the population was made up of 1,957,992 or 79.29 per cent. by natural increase, and 511,523 or 20.71 per cent. by net immigration. The greatest increase to the population by net immigration which has occurred in any one decade was during the ten years 1881 to 1890. This period, however, concluded in world wide speculation, which, in Australia, took the form of speculation in land values, and the effect of the financial collapse which followed this boom is shown by the small increment by migration from 1891 to 1910. For many of the years during this last-mentioned period there was an actual loss to Australian population by net migration. In 1907 the stream of migration again turned in favour of Australia, and during the five years 1909–1913 the net immigration represented 281,193. The war interrupted the flow, but in 1927 the net immigration represented 48,924 persons.

3. **Total Increase.**—The total increase of the population is obtained by the combination of the natural increase with the net immigration.

The following table gives the total increase in each decade from 1861 to 1920 and for the seven years 1921 to 1927 :—

POPULATION.—TOTAL INCREASE, 1861 TO 1927.

Period.	States.						Territories.		Australia.
	N.S.W. (d)	Victoria.	Q'land.	S. Aust. (a)	W. Aust.	Tas.	Northern. (b)	Fed. Cap. (c)	
					MALES.				
1861 to 1870	74,270	66,928	52,404	30,554	5,914	3,864	..	..	233,934
1871 to 1880	132,831	53,328	54,792	52,544	1,474	7,051	..	..	302,020
1881 to 1890	197,752	144,961	99,239	18,611	11,869	15,885	..	..	488,317
1891 to 1900	113,343	6,254	51,432	18,588	81,234	13,310	..	..	284,161
1901 to 1910	142,134	44,709	50,829	26,208	47,883	9,103	−1,550	..	319,316
1911 to 1920	210,733	107,321	71,042	38,743	18,924	8,393	173	93	455,422
1921 ..	16,454	11,102	8,352	6,844	1,605	2,767	−193	66	46,997
1922 ..	23,296	23,721	10,895	5,331	4,886	−532	−178	315	67,734
1923 ..	19,500	17,920	12,510	7,865	6,043	52	−13	−36	63,841
1924 ..	23,564	17,636	11,803	8,361	5,912	−977	11	236	66,546
1925 ..	20,831	14,511	14,704	9,089	4,255	−522	12	587	63,467
1926 ..	24,969	13,706	10,825	10,056	3,614	−1,717	223	590	62,266
1927 ..	27,417	15,010	9,503	5,416	8,418	706	364	408	67,242
1861 to 1927	1,027,094	537,107	458,330	238,210	202,031	57,383	−1,151	2,259	2,521,263
					FEMALES.				
1861 to 1870	75,176	118,763	34,812	28,410	3,875	7,201	..	..	268,237
1871 to 1880	110,319	81,352	40,976	39,303	2,952	6,853	..	..	281,755
1881 to 1890	174,381	130,162	81,837	23,943	7,072	14,112	..	..	431,507
1891 to 1900	133,687	56,231	50,299	24,572	50,231	14,803	..	..	329,823
1901 to 1910	141,416	60,486	54,340	23,410	48,982	11,800	−6	..	340,428
1911 to 1920	238,779	119,180	80,566	45,395	35,567	10,556	515	234	530,792
1921 ..	19,740	11,675	9,255	4,561	2,787	2,797	−62	26	50,779
1922 ..	21,720	15,818	9,164	5,452	3,007	1,140	−5	178	56,474
1923 ..	17,013	17,235	10,368	3,689	4,164	98	17	101	52,685
1924 ..	21,441	14,079	11,923	5,397	4,397	−258	31	140	57,150
1925 ..	23,161	12,411	11,587	4,038	3,804	−285	47	351	55,114
1926 ..	24,370	14,104	10,183	4,705	2,949	−561	19	395	56,164
1927 ..	25,068	14,553	7,480	3,961	5,128	402	99	407	57,098
1861 to 1927	1,026,271	666,049	412,790	216,836	174,915	68,658	655	1,832	2,568,006
					PERSONS.				
1861 to 1870	149,446	185,691	87,216	58,964	9,789	11,065	..	..	502,171
1871 to 1880	243,150	134,680	95,768	91,847	4,426	13,904	..	..	583,775
1881 to 1890	372,133	275,123	181,076	42,554	18,941	29,997	..	..	919,824
1891 to 1900	247,030	62,485	101,731	43,160	131,465	28,113	..	..	613,984
1901 to 1910	283,550	105,195	105,169	49,618	96,865	20,903	−1,556	..	659,744
1911 to 1920	449,512	226,501	151,608	84,138	54,491	18,949	688	327	986,214
1921 ..	36,194	22,777	17,607	11,405	4,392	5,564	−255	92	97,776
1922 ..	45,016	39,539	20,059	10,783	7,893	608	−183	493	124,208
1923 ..	36,513	35,155	22,878	11,554	10,207	150	4	65	116,526
1924 ..	45,005	31,715	23,726	13,758	10,309	−1,235	42	376	123,696
1925 ..	43,992	26,922	26,291	13,127	8,059	−807	59	938	118,581
1926 ..	49,339	27,810	21,008	14,761	6,563	−2,278	242	985	118,430
1927 ..	52,485	29,563	16,983	9,377	13,546	1,108	463	815	124,340
1861 to 1927	2,053,365	1,203,156	871,120	455,046	376,946	126,041	−496	4,091	5,089,269

(a) Including Northern Territory up to 1900. (b) Included in South Australia up to 1900. (c) Part of New South Wales prior to 1911. (d) Including Federal Capital Territory prior to 1911.

NOTE.—Minus sign (−) denotes decrease.

For Australia as a whole the greatest numerical increase during any decennial period occurred in the decade 1911 to 1920. The increase during this decade amounted to 986,214, or 22.29 per cent. The greatest proportional increase, on the other hand, occurred during the decade 1881–1890 when it amounted to 919,824, which, on the smaller population of that time represented an increase of 41.22 per cent. for the decade. Of this increase of 919,824, 537,083 or 58.38 per cent. was from the excess of births over deaths, whereas during the decade 1911–1920, of the total increase of 986,214 the natural increase produced 778,643 or 78.96 per cent. A graph showing the increase in the population of each State and of Australia from year to year since 1860 accompanies this chapter.

As regards the individual States the maximum increases in any decennium are as follows:—New South Wales, 449,512, in 1911–20; Victoria, 275,123, in 1881–90; Queensland, 181,076, in 1881–90; South Australia, 91,847, in 1871–80; Western Australia, 131,465, in 1891–1900; Tasmania, 29,997, in 1881–1890.

4. Rates of Increase.—(i) *For various Countries.* The table hereunder gives approximate rates of increase in population for Australia, and its component States, and for other countries:—

POPULATION.—RATES OF INCREASE (VARIOUS COUNTRIES), 1891 TO 1927.

Countries.	Annual Rate of Increase in Population during period—							
	1891 to 1896.	1896 to 1901.	1901 to 1906.	1906 to 1911.	1911 to 1916.	1916 to 1921.	1921 to 1926.	1927.
	%	%	%	%	%	%	%	%
AUSTRALASIA—								
Australia ..	1.86	1.49	1.38	2.03	1.95	1.99	2.09	2.03
New South Wales (*a*)	1.99	1.57	1.99	2.03	2.61	2.17	2.01	2.24
Victoria	0.37	0.52	0.18	2.17	1.38	1.68	2.00	1.73
Queensland ..	2.49	2.25	1.35	2.76	2.20	2.21	2.81	1.93
South Australia (*b*)	1.63	0.77	0.27	2.46	1.52	2.34	2.27	1.66
Western Australia	20.81	7.25	6.22	2.43	1.76	1.27	2.44	3.58
Tasmania ..	1.06	1.83	1.33	0.65	0.58	1.84	-0.33	0.51
New Zealand ..	2.41	1.98	2.86	2.56	1.61	2.32	1.95	1.46
EUROPE—								
England and Wales	1.15	1.15	1.04	1.04	−0.95	1.89	0.62	0.57
Scotland ..	1.06	1.06	0.55	0.56	0.31	0.24	0.09	−0.01
Ireland	−0.60	−0.43	−0.22	−0.06	−0.21	0.58	-0.60	−0.03
Austria	0.79	1.05	0.87	0.86	(*c*) 0.80	(*g*)	*i* 0.34	(*l*)
Belgium ..	1.15	0.92	1.26	0.69	0.54	−0.56	1.03	(*l*)
Denmark ..	0.99	1.32	1.12	1.26	1.20	2.13	1.01	(*l*)
Finland ..	1.20	1.41	1.36	1.43	1.18	0.25	*j* 0.94	(*l*)
France	0.09	0.24	0.15	0.16	−0.72	0.55	0.76	(*l*)
Germany ..	1.17	1.51	1.46	1.36	0.71	−1.62	*j* 1.04	(*l*)
Hungary ..	0.92	1.03	0.77	0.84	(*c*) 0.84	(*g*)	*j* 0.92	(*l*)
Italy	0.68	0.61	0.52	0.80	1.16	0.22	0.91	(*l*)
Netherlands ..	1.28	1.30	1.53	1.22	1.72	1.16	*j* 1.56	(*l*)
Norway ..	0.96	1.31	0.52	0.66	1.00	1.14	0.90	(*l*)
Prussia	1.29	1.59	1.57	1.48	0.85	−1.67	*j* 1.03	(*l*)
Rumania ..	1.15	1.41	1.46	1.48	(*e*) 2.77	(*g*)	*i* 1.50	(*l*)
Serbia	1.37	1.57	1.52	1.55	(*c*) 1.72	(*g*)	*i* 1.32	(*l*)
Spain	0.45	0.45	0.52	0.87	0.66	(*f*) 0.34	*j* 0.73	(*l*)
Sweden ..	0.61	0.86	0.61	0.84	0.70	0.64	0.40	(*l*)
Switzerland ..	1.22	1.10	1.28	1.17	0.81	0.01	*j* 0.29	(*l*)
ASIA—								
Ceylon	1.41	2.03	1.62	1.20	1.71	1.28	*k* 2.29	(*l*)
Japan	0.96	1.25	1.29	1.08	1.42	0.37	*j* 1.31	(*l*)
AMERICA—								
Canada	0.97	1.19	2.99	2.99	(*d*) 3.87	(*h*) 2.00	1.58	1.38
Chile	2.66	0.90	1.53	1.56	1.66	0.07	1.04	(*l*)
Jamaica ..	1.66	1.72	1.63	0.28	1.36	(*f*) 0.62	*k* 1.66	(*l*)
United States ..	1.93	2.02	2.00	1.82	1.67	1.21	1.67	1.27

(*a*) Including Federal Capital Territory. (*b*) Including Northern Territory. (*c*) 1911 to 1912. (*d*) 1911 to 1914. (*e*) 1911 to 1915. (*f*) 1916 to 1920. **(*g*) Not available owing to changes of boundaries.** (*l*) Not available. (*h*) 1911–21. (*i*) 1920–25. (*j*) 1920–24. (*k*) 1921–25.

NOTE.—The minus sign (—) denotes decrease.

(ii) *Variations in the Rates.*—The fluctuations in the rates of increase in the population of Australia are, for the greater part, due to variations in the volume of immigration.

The more important of these periodic variations, so far as they affected the population of Australia as a whole, have been referred to in the preceding sub-sections dealing with net immigration. The large increase in the population of Western Australia during the quinquennium 1892–96 marks the opening up of the gold mines of that State.

§ 5. Seasonal Variations of Population.

1. **Variations in Natural Increase.**—The following table shows the natural increase to the population, during each quarter of the year, based on the experience of the ten years 1918–1927. For Australia as a whole, the rate of natural increase was greatest in the quarter ended 31st March, and least in the quarter ending 30th June, the difference between the rates of increase for these two periods being equal to 23 persons for every 100,000 of the population. In New South Wales, Victoria, South Australia and Western Australia the March quarter was the most favourable, in Queensland the June quarter, and in Tasmania the December quarter. The natural increase was lowest in New South Wales, Victoria and Tasmania in the June quarter, in Queensland and Western Australia in the December quarter, and in South Australia in the September quarter. The differences between the least favourable and the most favourable quarters ranged from 23 per 100,000 of the population in Victoria to 34 per 100,000 in New South Wales.

During recent years there have been two unusual occurrences which have considerably disturbed the normal contributions of the several quarters. The first of these was the payment of the Maternity Allowance which commenced on the 10th October, 1912, with the result that births were registered in the December quarter of that year, which otherwise would not have been registered until the March quarter of the following year. As the results given in earlier issues in this connexion are the averages for decennial periods, this factor is present in the results given for the December quarter up to and including the decade 1912–21, but, with the increasing population it became less important from year to year. Although this factor did not seriously disturb the order of increase in the various quarters, it very materially reduced the margins between the highest and the lowest quarters.

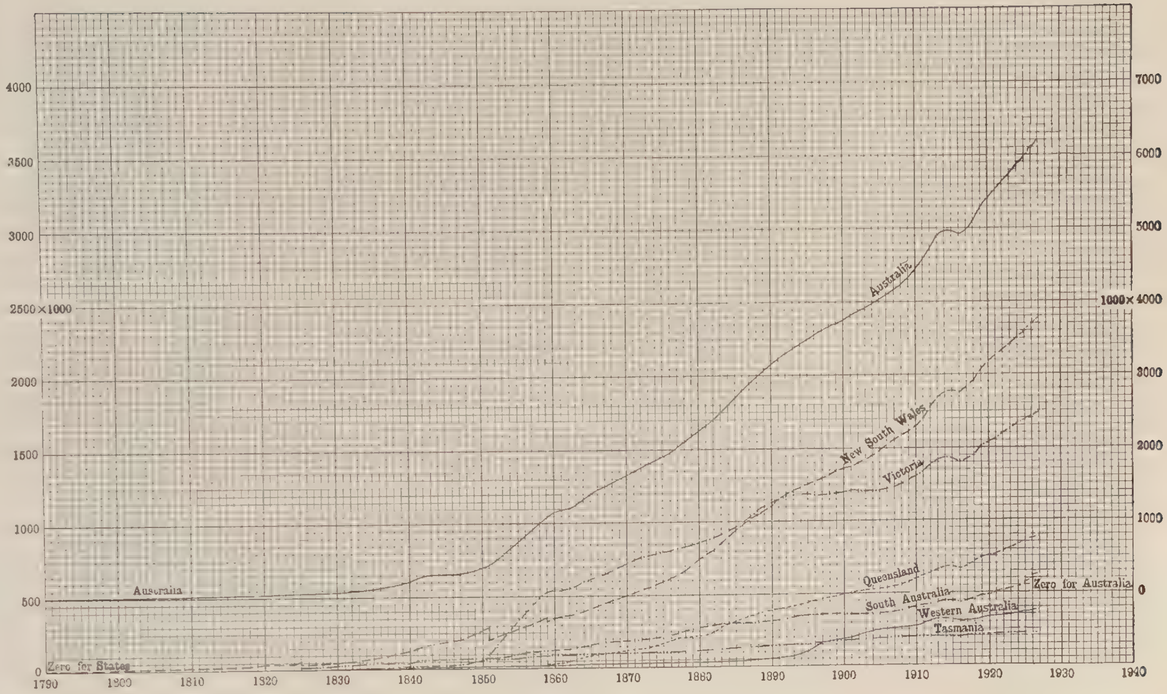
The other disturbance referred to was the influenza epidemic of 1919. The total number of deaths during 1919, for which influenza was stated to be the primary cause, was 11,989, which were distributed over the four quarters of the year as follows :—March quarter, 926 ; June quarter, 5,958 ; September quarter, 4,658 ; December quarter, 447. Prior to this epidemic, the September quarter had been consistently the highest, and the June quarter had been, almost invariably, next in order during each decade from 1901–10 to 1909–18, while the March quarter had been almost consistently the lowest. The same consistency, however, did not prevail throughout the individual years. The deaths from influenza in the June and September quarters, and the comparative freedom of the March quarter from such deaths, assisted in giving the March quarter precedence in the successive decennial periods in which the year 1919 is included. Apart, however, from the effect of the influenza epidemic the March quarter has contributed towards the natural increase to the population at a greater rate than any other quarter of the year during the quinquennial period 1923–27.

POPULATION.—AVERAGE QUARTERLY NATURAL INCREASE, 1918 TO 1927.

State or Territory.	Average Natural Increase for Quarter ended on last day of—								Average Natural Increase per Annum. 1918–27.	
	March.		June.		September.		December.			
	Persons.	°/°°	Persons.	°/°°	Persons.	°/°°	Persons.	°/°°	Persons.	°/°°
N.S.W.	8,338	3.89	7,637	3.55	7,816	3.61	8,152	3.75	31,943	14.91
Victoria	4,749	3.02	4,408	2.79	4,497	2.84	4,778	3.00	18,432	11.74
Q'land	3,076	3.93	3,114	3.95	3,004	3.76	2,914	3.63	12,108	15.48
S. Aust.	1,744	3.44	1,674	3.28	1,612	3.14	1,648	3.19	6,678	13.16
W. Aust.	1,205	3.52	1,182	3.43	1,147	3.31	1,120	3.21	4,654	13.59
Tas. ..	845	3.97	805	3.82	848	4.05	858	4.10	3,356	15.76
N. Ter.	2	0.50	6	1.50	5	1.23	— 2	—0.49	11	2.75
F.C. Ter.	6	2.20	5	1.33	8	2.05	5	1.22	24	8.78
Total	19,965	3.59	18,831	3.36	18,937	3.37	19,473	3.44	77,206	13.87

NOTE.—The minus sign (—) indicates an excess of deaths over births, and °/°° denotes "per thousand."

TOTAL POPULATION, 1788 TO 1927.

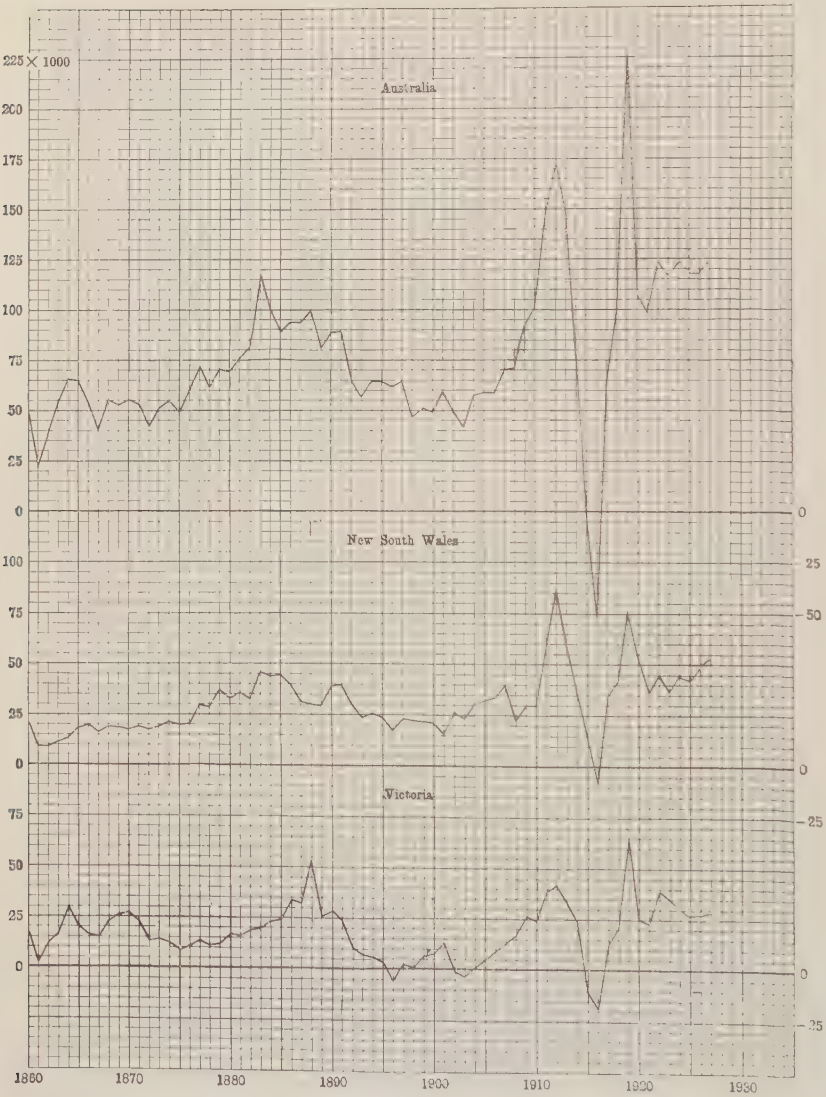


(See page 882.)

EXPLANATION.—The base of each small square represents one year's interval for the States and Australia, and the vertical height for the States 50,000 persons, and for Australia 100,000 persons.

Where the population falls suddenly, the fall denotes the creation of a new colony, *e.g.*, New South Wales in 1825 lost the whole population of Tasmania.

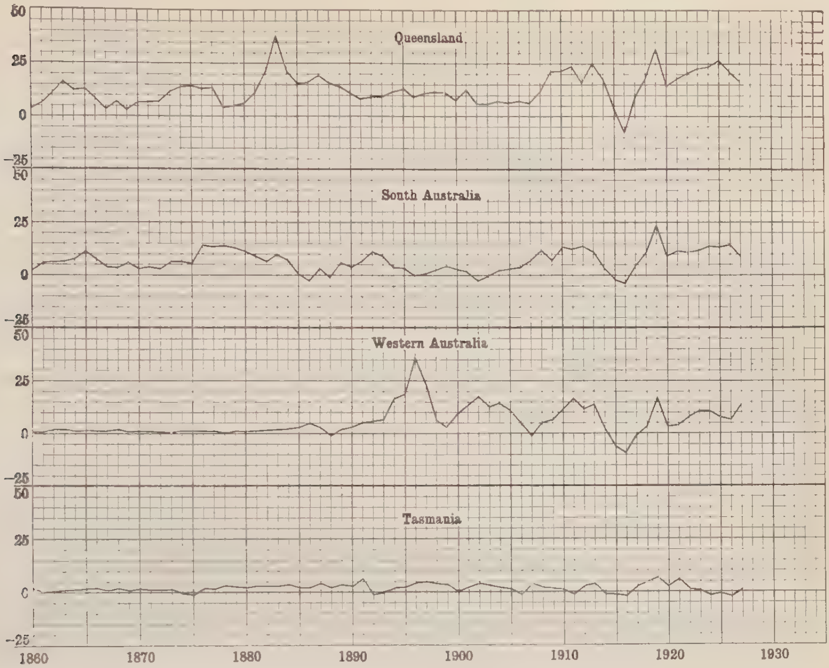
TOTAL INCREASE OF POPULATION—AUSTRALIA, AND NEW SOUTH WALES AND VICTORIA, 1860 TO 1927.



(See page 890.)

(For explanation see next page.)

TOTAL INCREASE OF POPULATION.—QUEENSLAND, SOUTH AUSTRALIA, WESTERN AUSTRALIA, AND TASMANIA, 1860 TO 1927.

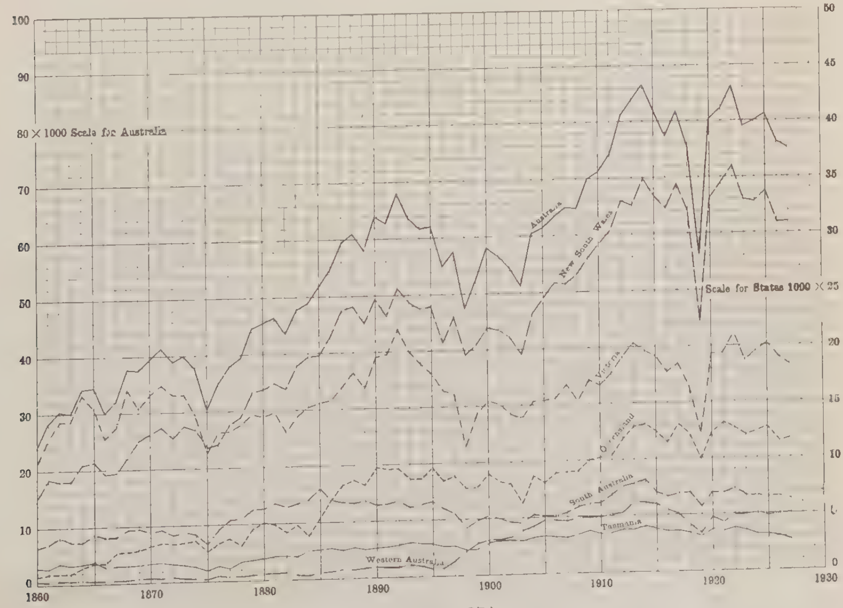


(See page 890.)

EXPLANATION.—The base of each small square represents an interval of a year for both States and Australia; the vertical height represents 5,000 persons. In the first graph (on page 894) three zero lines are taken (i) for Australia, (ii) for New South Wales, and (iii) for Victoria. In the second graph four zero lines are taken (i) for Queensland, (ii) for South Australia, (iii) for Western Australia, and (iv) for Tasmania.

DECREASES in population are shown by carrying the curve in such cases below the zero line, the distance below the zero line indicating the extent of the decrease.

NATURAL INCREASE OF POPULATION 1860 TO 1927.



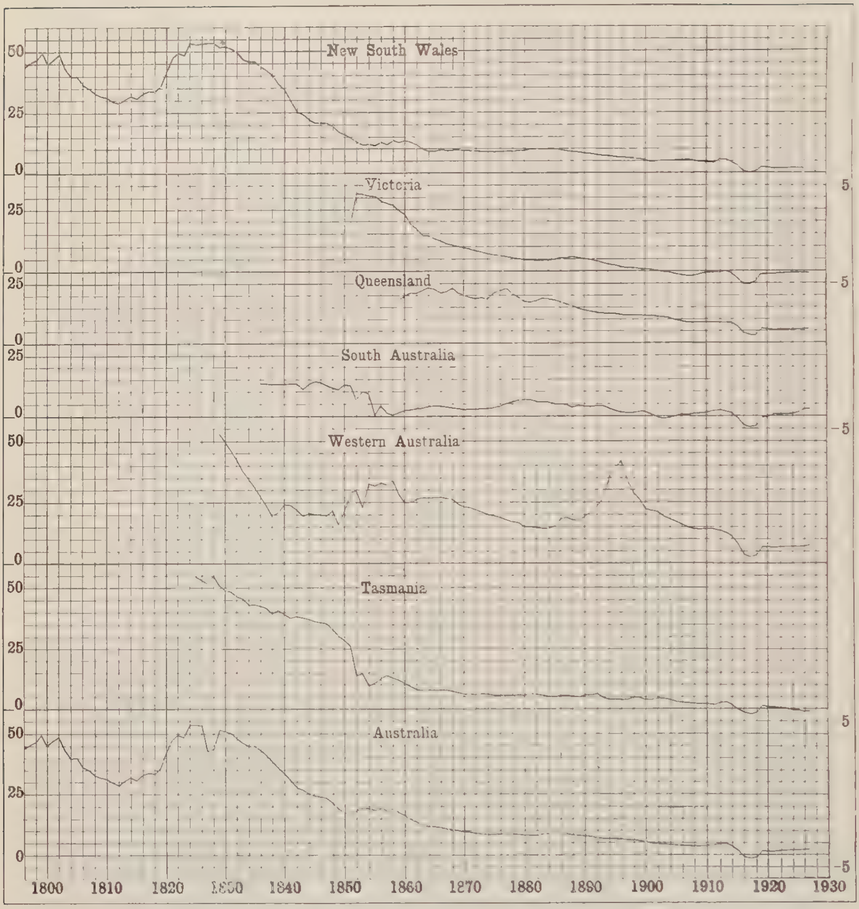
(See page 887.)

EXPLANATION.—The base of each small square represents one year for both States and Australia, and the vertical height 1,000 persons for the States and 2,000 persons for Australia.

The distances upward from the zero line, marked 0 for both Australia and States, denote the excess

and that on the right to the States.

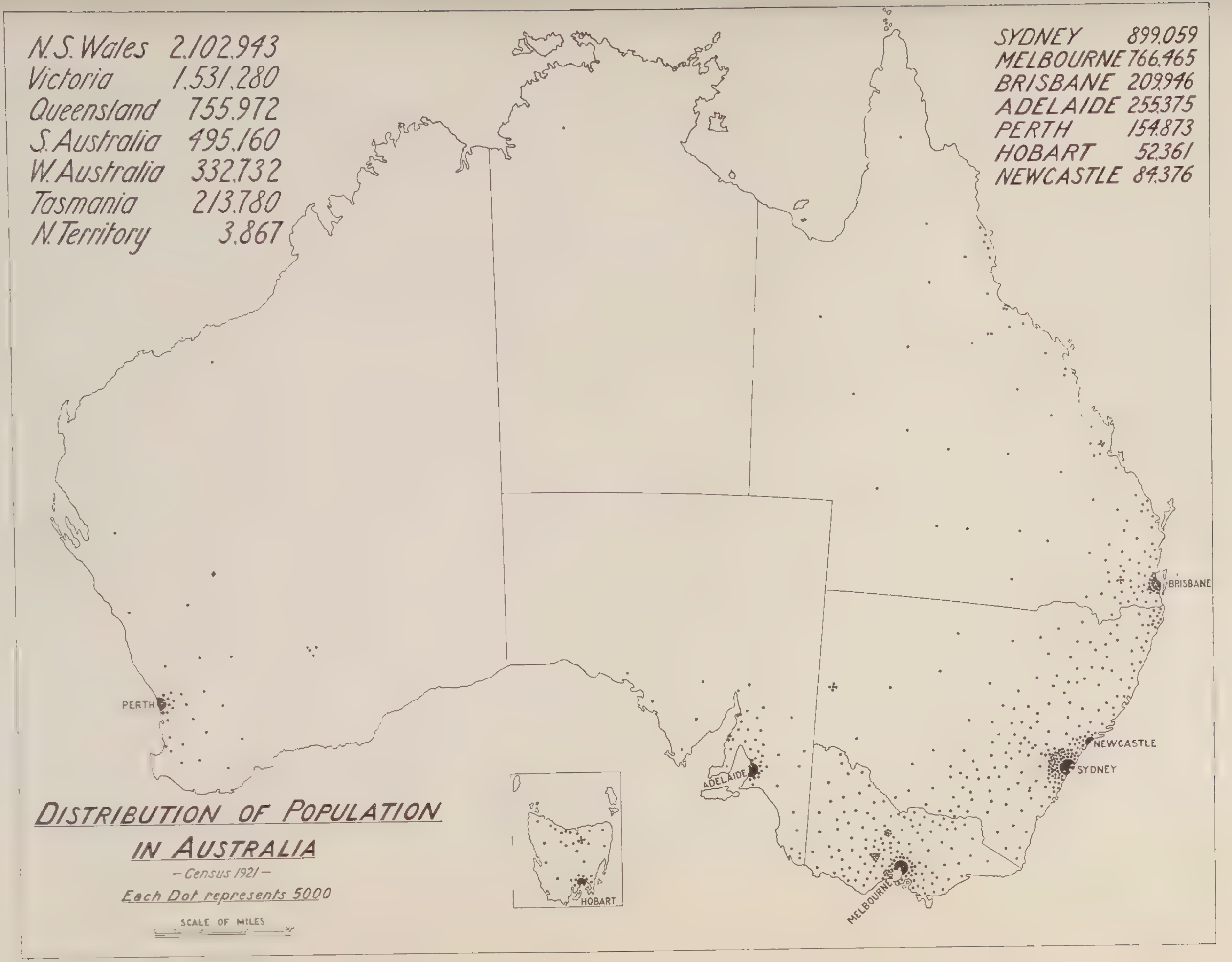
MASCULINITY OF POPULATION—1796 TO 1927.



(See page 907.)

Explanations.—The base of each small square represents an interval of two years, and the vertical height an excess of five males per 100 of the population. The basic lines (shown thickened) for Australia and all the States are at zero, equivalent to a numerical equality of the sexes.

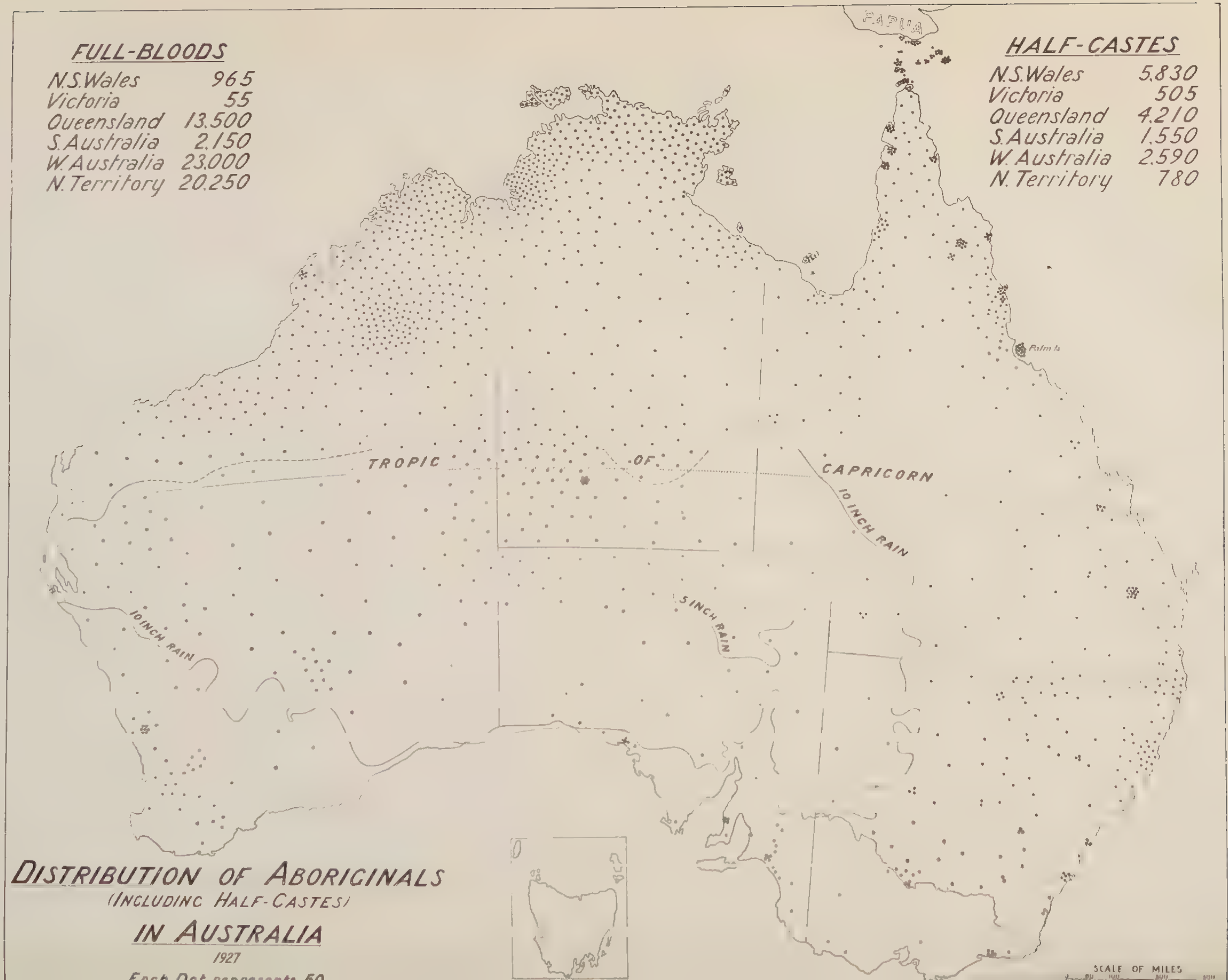
It will be noticed that in the case of Australia in the years 1916, 1917, and 1918, Victoria in the years 1903 to 1927, South Australia in the years 1902 to 1904 and 1915 to 1920, and Tasmania for the years 1915 to 1918, and 1924 to 1927 the curves are below the zero line, thus showing an excess of females over males.



DISTRIBUTION OF POPULATION IN AUSTRALIA

—Census 1921—

Each Dot represents 5000



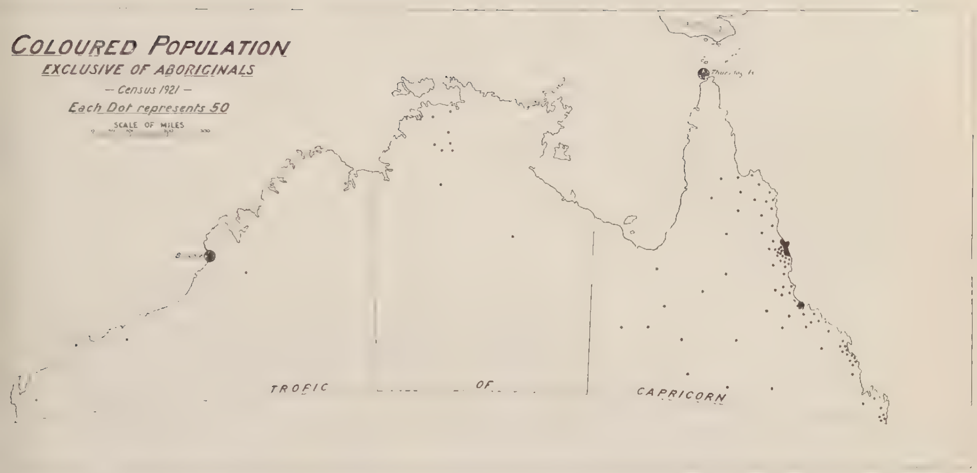
FULL-BLOODS

N.S.Wales	965
Victoria	55
Queensland	13,500
S.Australia	2,150
W.Australia	23,000
N.Territory	20,250

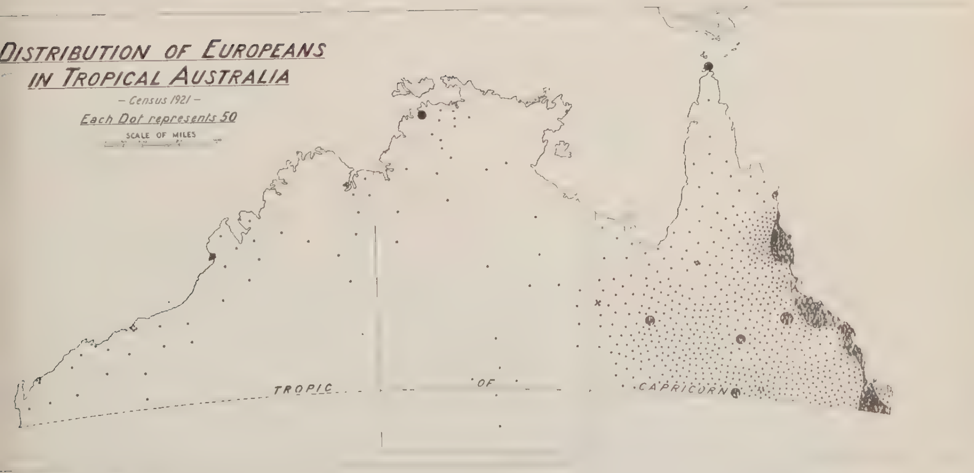
HALF-CASTES

N.S.Wales	5,830
Victoria	505
Queensland	4,210
S.Australia	1,550
W.Australia	2,590
N.Territory	780

DISTRIBUTION OF ABORIGINALS
(INCLUDING HALF-CASTES)
IN AUSTRALIA
1927
Each Dot represents 50



COLOURED POPULATION
EXCLUSIVE OF ABORIGINALS
— Census 1921 —
Each Dot represents 50



DISTRIBUTION OF EUROPEANS
IN TROPICAL AUSTRALIA
— Census 1921 —
Each Dot represents 50

The results for the five years 1913–17 show that of the total natural increase the September quarters contributed 25.77 per cent. and the March quarters 25.05 per cent., whereas during the period 1923–27 the contribution by the September quarters had fallen to 24.18 per cent., while that of the March quarters had increased to 26.13 per cent. This precedence of the March quarter of the September quarter was noticeable in a marked degree in 1922 and has been consistently maintained since.

The favourable position formerly held by the September quarter was due entirely to its higher birth rates, and, although this quarter continues to make the greatest contribution to births, that contribution has been less, relatively to the total, than it was. The precedence recently taken by the March quarter has been mainly the result of the altered seasonal incidence of deaths. Notwithstanding an increase of 19.84 per cent. in the population during the interval between 1913-17 and 1923-27, and an increase during the same period in the average annual number of deaths of 8.7 per cent., the deaths during the March quarter have increased by only 2.04 per cent., while the September quarter shows an increase of 15.33 per cent. The sympathy between the results for the March and December quarters in this connexion points to a reduction in the deaths from summer causes. Associated with this change—perhaps the most important factor contributing to it—is the reduction which has been recorded in the numbers of infantile deaths. During the interval of 10 years between 1913–17 and 1923–27 the annual number of infantile deaths has been reduced by 16.94 per cent.; those in the March quarter have been reduced by 20.68 per cent., and in the December quarter by 24.88 per cent.

2. Variations in Net Immigration.—In the following table the figures relating to the separate States and Territories include interstate migrants, but so far as these persons are concerned, the arrivals into any State are departures from some other State, so that they do not affect the figures shown for Australia as a whole, which, therefore, represent the oversea arrivals and departures. For each of the decades from 1901–1910 to 1904–1913 inclusive, the December quarter showed the greatest rate of increase from migration, with the other quarters consistently in order directly reverse to their position in the calendar.

The derangement of passenger traffic and the despatch and return of troops, to and from the war, completely upset the normal passenger movements. The effect of the movements of troops during the years 1918, 1919 and 1920 is still noticeable in the figures for the decade 1918–27, but the results for each of the years subsequent to 1920 revert to the pre-war experience and show the greatest gain by net migration in the December quarter. The reason for this is, of course, that the majority of tourists to and from the northern hemisphere wish to escape the winter months. The ordinary seasonal effect on the net migration of the several States as shown in the following table is necessarily affected by the same causes. During the five years 1923–27 the greatest gains in New South Wales, Victoria, South Australia and Tasmania have been in the December quarter, though with the exception of Tasmania this experience has not been common to every year. The gain to these southern States in the December quarter is due to oversea traffic and to tourists and sugar workers returning from Queensland, which loses heavily during the December quarter, but gains in the June quarter by tourists seeking the warmer winter climate. The June quarter has also been most favourable to Western Australia during the last five years, though the results from year to year have been very variable. The increase to Tasmania during the December quarter is from the influx of tourists from the mainland, but this is unfortunately more than counterbalanced by the consistent losses during each of the other quarters.

POPULATION.—AVERAGE QUARTERLY NET IMMIGRATION, 1918 TO 1927.

State or Territory.	Quarter ended on last day of—								Average Net Immigration per Annum, 1918–27.	
	March.		June.		September.		December.			
	Persons.	°/°°	Persons.	°/°°	Persons.	°/°°	Persons.	°/°°	Persons.	°/°°
N.S.W.	3,536	1.65	1,093	0.51	6,003	2.78	5,447	2.50	16,079	7.51
Victoria	4,329	2.76	1,462	0.92	3,203	2.02	5,007	3.14	14,001	8.92
Q'land	2,041	2.61	8,056	10.23	2,321	2.91	–3,258	– 4·05	9,160	11.71
S. Aust	995	1.96	808	1.58	1,712	3.34	2,713	5.26	6,228	12.28
W. Aust.	663	1.94	1,354	3.93	1,304	3.76	570	1.63	3,891	11.36
Tas. ..	–2,797	–13.14	–2,530	–11.99	– 775	–3.70	4,532	21.65	–1,570	– 7.37
N.T. ..	– 8	– 2.00	67	16.79	– 22	–5.41	– 92	– 22.73	– 55	–13.76
F.C.Ter.	1,032	377.68	128	33.95	151	38.69	– 972	–237.95	339	124.06
Total	9,791	1.76	10,438	1.87	13,897	2.47	13,947	2.46	48,073	8.64

NOTE.—The minus sign (—) denotes excess of departures over arrivals, and °/°° denotes "per thousand" of population.

§ 6. Influences affecting Increase and Distribution.

1. **Mineral Discoveries.**—The discovery of gold in Australia in 1851 was undoubtedly one of the most influential factors in bringing about a rapid settlement of the country. Its effect may be gauged by comparing the increase during the ten years preceding with that during the ten years succeeding the discovery. From 31st December, 1840, to 31st December, 1850, the increase was only 214,948 (from 190,408 to 405,356). During the succeeding decennium there was an increase of 740,229, the population advancing to 1,145,585 on 31st December, 1860. In 1861, owing to the opening up of the New Zealand goldfields, a rush of population from Australia set in, the result being that the net increase per annum to the population of Australia, which in 1855 amounted to 98,343, and even in 1860 was as much as 48,280, fell in 1861 to 22,564. In fact, during the year 1861 the departures from Australia exceeded the arrivals by 6,283, the gain of 22,564 being due to the births exceeding the deaths by 28,847.

In 1886 and subsequent years the gold discoveries of Western Australia led to such extensive migration to that State that its population, which on 31st December, 1885, amounted to only 35,959, increased during the next twenty years by 595 per cent., or by 10.18 per cent. per annum, to 250,138 in 1905. In this case, however, the additions to the population of the western State were largely drawn from the eastern States, so that the actual gain of population to Australia was relatively small.

2. **Pastoral Development.**—Very early in the colonization of Australia it was recognized that large areas were well adapted for pastoral pursuits, and pastoral developments led to the spread of population in various directions. As the numbers engaged in connexion therewith, compared with the value of the interests involved, are relatively small, and as pastoral occupancy tends to segregration rather than aggregation of population, the growth of the pastoral industry is not noticeably reflected in the population statistics.

3. **Agricultural Expansion.**—At the present time the area under crop in Australia is over 17¾ million acres. Although substantial in itself, this area, viewed in relation to the total area of Australia, is relatively small, and represents only 0.93 per cent. of the total area. Per head of population the area under crop, however, is 2.9 acres, a fairly large area when allowance is made for the recency of Australian settlement. More than 80 per cent. of the area under crop in 1926–27 was devoted to the production of wheat and hay, both of which, for profitable production in Australia, require a considerable area in the one holding. Consequently, the agricultural districts are for the most part sparsely populated, though in a less marked degree than the pastoral areas.

4. Progress of Manufacturing Industries.—One direct effect of the development of manufacturing industries is the concentration of population in places offering the greatest facilities for the production of particular commodities. In Australia, where manufacturing industries are as yet in their infancy, the tendency throughout has been to concentrate the manufacturing establishments in each metropolis. This has accentuated the growth of the capital cities to an extent which, when compared with that of the rest of the country, appears somewhat abnormal.

5. Influences of Droughts.—Droughts, which at times so seriously affect the agricultural and pastoral industries of Australia, have a marked influence on the distribution of population. Districts, which in favourable seasons are fairly populous, become more or less depopulated in times of drought. This movement, however, ordinarily affects only the internal distribution of the population, and not the total, but severe drought may even make its influence felt in the statistics of the total population. Thus, in the case of the drought of 1902–3, the departures from Australia exceeded the arrivals for the two years 1903 and 1904 by 12,859. It may be noted also, that for the former of these years, the natural increase of population by excess of births over deaths was abnormally low, being only 51,150, as compared with 54,698 in the preceding, and 60,541 in the succeeding year. As the solution of the problem of dealing with droughts is advanced, their influence will be less marked.

6. Assisted Immigration.—Assisted immigration has been a factor of some importance in the increase of population. The number of persons brought to Australia by this means has varied considerably in different periods, according to the activities of Governments in this direction. The table given in sub-section 5 of § 10 hereinafter shows that 1,025,682 persons have been brought to Australia in connexion with schemes for assisting immigration.

7. Other Influences.—(i) *Commercial Crises.* The effect on population of a commercial crisis, such as that which occurred in the early nineties of last century, is clearly indicated by comparing the migration statistics of Australia for the five years 1887 to 1891 with those for the five years 1892 to 1896. During the earlier periods the arrivals exceeded the departures by 146,872, whereas in the later period the excess of arrivals was only 2,064.

(ii) *War.* The war in South Africa left its impress on the population statistics of Australia, the departures during 1899 and 1900 exceeding the arrivals by 10,546. The effect of the recent European war is, of course, much more marked.

§ 7. Density.

1. General.—From certain aspects population may be less significant in respect of its absolute amount than in its relation to the area of the country. Australia, with an area of 2,974,581 square miles, and a population on 31st December, 1927, of 6,294,854 including aboriginals, has a density of only 2.12 persons to the square mile, and is, therefore, the most sparsely populated of the civilized countries of the world. For the other continents the densities are approximately as follows :—Europe, 122 ; Asia, 67 ; Africa, 10 ; North and Central America, 18 ; and South America, 11. The population of Australia has thus about 26 per cent. of the density of South America ; about 26 per cent. of that of Africa ; about 15 per cent. of that of North and Central America ; about 4 per cent. of that of Asia ; and about 2 per cent. of that of Europe.

A map showing the density of population throughout Australia as at the Census of 1921 accompanies this chapter.

Particulars concerning the number and density of the population of the various countries of the world for the latest dates for which such information is available are given in the following table. These figures have in the main been taken from the 1928 issue of the "Statesman's Year Book," and in some instances, more particularly in the cases of Asia and Africa, must be considered as rough approximations only, complete data not being obtainable.

POPULATION, WORLD'S.—NUMBER AND DENSITY.

Country.	Population.	Density (*a*).
EUROPE.		
Russia	107,211,850	65.96
Germany	63,180,619	347.69
Great Britain and Northern Ireland	45,438,000	480.15
France	40,743,851	191.59
Italy	40,406,000	339.14
Poland	29,589,000	197.32
Spain (including Canary and Balearic Islands)	22,290,162	114.42
Rumania	17,393,149	142.24
Czecho-Slovakia	14,356,600	264.84
Jugo-Slavia	12,017,323	125.01
Hungary	8,457,852	235.52
Belgium	7,874,601	669.89
Netherlands	7,526,606	569.76
Greece	6,600,000	132.23
Austria	6,534,481	201.88
Sweden	6,074,368	35.08
Portugal	6,032,991	169.99
Bulgaria	5,483,125	137.72
Switzerland	3,959,000	248.37
Finland	3,558,059	26.82
Denmark	3,457,390	201.67
Irish Free State	2,972,802	110.10
Norway	2,788,893	22.32
Lithuania	2,254,668	71.23
Latvia	1,844,805	73.79
Turkey	1,203,151	110.57
Estonia	1,117,270	60.85
Albania	831,877	47.88
Danzig	384,000	509.27
Luxemburg	260,767	261.03
Malta	227,440	186.43
Aegean Islands	114,642	117.46
Iceland	101,764	2.56
Monaco	22,153	2769.13
Gibraltar	20,638	10319.00
San Marino	12,952	340.84
Liechtenstein	10,716	164.89
Andorra	5,231	27.39
Spitzbergen	1,197	0.05
Total	472,359,993	121.55
ASIA.		
China and Dependencies	468,197,000	109.41
British India	247,003,293	225.72
Japan and Dependencies	83,458,405	320.12
Feudatory Independent States	71,939,187	101.18
Netherlands East Indies	51,013,878	89.04
Russia in Asia	39,801,759	6.02
Turkey, including Armenia and Kurdistan	12,446,794	25.74
Persia	12,000,000	19.11
Philippine Islands	11,568,994	100.58
Siam	9,831,000	49.05
Afghanistan	8,000,000	32.68
Tonking	7,401,912	182.63
Arabia	7,000,000	7.00
Nepal	5,600,000	103.70
Annam	5,580,974	140.37
Ceylon	5,009,500	197.75
Cochin China	4,119,832	155.61
Iraq	2,849,282	19.89
Cambodia	2,535,178	37.53
Syria	2,046,857	34.11
Federated Malay States	1,476,032	53.66
Malay Protectorate, including Johore	1,123,264	50.58
Kwantung	1,089,678	2025.43

Country.	Population.	Density. (*a*)
ASIA—*continued*.		
Straits Settlements	1,003,754	62.73
British Borneo, Brunei and Sarawak	1,002,000	12.97
Palestine	887,000	98.55
Hong Kong and Dependencies	874,420	2236.37
Laos	855,146	10.35
Goa, etc.	548,472	334.84
Oman	500,000	6.10
Timor, etc.	442,261	60.34
Cyprus	310,709	86.69
French India	284,432	1451.17
Bhutan	250,000	12.30
Kwan Chau Wan	205,000	1078.95
Weihaiwei	154,416	541.81
Bahrein Islands	120,000	480.00
Macao, etc.	83,984	20996.00
Maldive Islands	70,000	608.69
Aden and Dependencies	55,000	6.11
Tientsin	51,480	25740.00
Total	1,068,788,893	67.07
AFRICA.		
Nigeria and Protectorate	18,765,690	55.90
Egypt	14,168,756	36.99
Abyssinia	10,000,000	28.57
Belgian Congo	8,500,000	9.26
Union of South Africa	7,085,752	15.01
Anglo-Egyptian Sudan	7,005,966	6.91
Algeria	6,064,865	71.60
Angola	5,000,000	10.31
Tanganyika Territory	4,323,300	11.84
Morocco	4,229,146	21.16
Madagascar	3,621,342	15.02
Upper Volta	3,240,147	22.68
Uganda Protectorate	3,136,946	33.30
French Equatorial Africa	3,127,707	3.21
Portuguese East Africa	3,120,000	7.29
French Sudan	2,634,982	73.13
Kenya Protectorate	2,736,517	12.16
Liberia	2,500,000	58.14
Tunis	2,159,708	44.72
French Guinea	2,133,003	23.02
Gold Coast and Protectorate	2,078,043	25.98
French Cameroon	1,878,683	11.28
Ivory Coast	1,724,545	14.18
Sierra Leone and Protectorate	1,541,311	49.72
Senegal	1,318,287	17.79
Nyasaland Protectorate	1,293,391	34.14
Territory of the Niger	1,218,717	2.63
Northern Rhodesia	1,145,267	3.98
Dahomey	979,609	23.72
Italian Somaliland	900,000	4.74
Southern Rhodesia	877,000	5.89
Portuguese Guinea	770,000	55.24
British Cameroons	660,000	21.29
Spanish Morocco	600,000	77.92
Tripolitania	570,716	0.63
French Sahara	542,225	0.36
Togoland (French)	508,302	23.22
Basutoland	408,781	42.57
Eritrea	407,044	8.90
Mauritius and Dependencies	398,000	491.96
Somaliland Protectorate	345,000	5.07
Mauritania	289,184	1.86
South-West Africa	259,000	0.78
Zanzibar	216,790	212.54
Gambia and Protectorate	200,000	48.38
Cyrenaica	195,000	0.54

(*a*) Number of persons per square mile.

POPULATION, WORLD'S.—NUMBER AND DENSITY—*continued.*

Country.	Population.	Density (*a*).
AFRICA—*continued.*		
Togoland (British)	188,265	14.94
Réunion	186,637	192.41
Bechuanaland Protectorate	152,983	0.56
Cape Verde Islands	131,147	88.91
Spanish Guinea	140,000	12.95
Comoro and Mayotte	119,305	151.02
Swaziland	112,838	14.65
St. Thomas and Principe	59,055	184.55
French Somaliland	56,059	9.68
Seychelles	26,397	169.21
Fernando Po, etc.	23,846	29.99
Ifni	20,000	20.73
Sokotra	12,000	8.68
St. Helena	3,728	79.32
Rio de Oro and Adrar	495	0.004
Ascension	250	7.35
Tristan da Cunha	130	10.83
Total	136,111,857	10.44
NORTH AND CENTRAL AMERICA.		
United States of America	118,628,000	39.19
Mexico	14,234,799	18.55
Canada	9,519,220	2.55
Cuba	3,568,552	80.80
Haiti	2,300,200	225.42
Guatemala	2,004,900	47.34
Salvador	1,657,000	125.76
Porto Rico	1,299,809	378.40
Jamaica, including Turks and Caicos Islands, etc.	936,927	200.46
Santo Domingo	897,405	46.42
Honduras	773,408	17.42
Nicaragua	638,119	12.35
Costa Rica	471,525	20.50
Trinidad and Tobago	387,470	196.09
Newfoundland and Labrador	262,299	1.61
Martinique	244,482	635.02
Guadeloupe and Dependencies	243,243	199.38
Windward Islands	177,070	346.16
Barbados	169,385	1020.42
Leeward Islands	122,242	170.97
Curacao	58,162	144.32
Bahamas	58,101	13.19
Alaska	55,036	0.09
British Honduras	48,584	5.65
Virgin Islands	26,051	197.36
Bermudas	30,113	1584.89
Greenland	14,355	0.31
St. Pierre et Miquelon	4,030	43.33
Total	158,830,487	18.33

Country.	Population.	Density, (*a*).
SOUTH AMERICA.		
Brazil	36,870,972	11.22
Argentine Republic	10,348,189	8.97
Colombia	6,617,833	15.01
Peru	5,550,000	10.43
Chile	4,004,014	13.80
Bolivia	3,464,945	6.73
Venezuela	3,053,497	7.75
Uruguay	1,720,468	23.84
Ecuador and Galapagos	1,562,500	14.21
Paraguay	828,969	13.45
Panama Republic	442,522	13.67
British Guiana	306,844	3.43
Dutch Guiana	142,896	2.63
French Guiana	47,341	1.36
Panama Canal Zone	27,642	49.90
Falkland Islands and South Georgia	4,166	1.74
Total	74,992,798	10.51
OCEANIA, ETC.		
Australia	(*b*) 6,294,854	2.12
New Zealand	1,465,325	14.11
Territory of New Guinea	400,000	4.72
Hawaii	299,000	46.36
Papua	276,452	3.05
Dutch New Guinea	195,460	1.22
Fiji	171,644	24.23
Solomon Islands (British)	150,583	13.69
New Hebrides	66,000	11.58
Marshall Islands, etc.	56,175	58.52
New Caledonia	56,065	6.56
Western Samoa	40,558	32.45
Gilbert and Ellice Islands Colony	29,381	29.06
French Oceania	35,862	23.59
Tonga	25,918	67.32
Guam	17,018	81.04
Samoa (American)	8,772	141.48
Nauru	2,163	216.30
Norfolk Island	747	57.46
Pitcairn Island	140	70.00
Phoenix Group	59	3.68
Total	9,592,176	2.77
SUMMARY.		
Europe	472,359,993	121.55
Asia	1,068,788,893	67.07
America, North and Central	158,830,487	18.33
Africa	136,111,857	10.44
America, South	74,992,798	10.5
Oceania, etc.	9,592,176	2.77
Total	1,920,676,204	36.84

(*a*) Number of persons per square mile. (*b*) Including 60,000 aboriginals.

2. Position of the British Empire.—The approximate relationship of the British Empire to the world as a whole in regard to its area and population is given hereunder:—

BRITISH EMPIRE IN RELATION TO THE WORLD.

Particulars.	The World.	British Empire.
Area in square miles (exclusive of Polar Circles)	52,130,000	13,397,000
Population	1,920,676,000	456,544,000
Population per square mile	36.8	34.1

§ 8. General Characteristics.

1. **Sex Distribution.**—(i) *General.* The distribution of the sexes in the populations of young countries shows marked contrasts to that of older countries. In young countries there will be, invariably, a greater number of males than females, whereas in countries which have been long settled the females predominate. In the older countries the populations have grown almost entirely by the excess of births over deaths, which tends towards equality in the numbers of the sexes. The table on page 908, however, shows that in many instances, this natural tendency has been deflected to an excess of females. This has been due possibly to the following causes—(*a*) preponderance of males amongst emigrants; (*b*) greater propensity of males to travel; (*c*) employment of males away from the home country in the army, navy, and mercantile marine; (*d*) effects of war. In a young country, on the other hand, the increase in the population is largely brought about by immigration, in which males preponderate. The pioneering conditions of a young country, naturally, are less attractive to females than to males, and in the case of Australia, the disabilities inseparable from the early stages of settlement were aggravated by the great distance from the mother country.

Information regarding the sexes of the first settlers in Australia is not available, but on the 31st December, 1796—nearly nine years later—there was an excess of 44 males in every 100 of a total population of 4,100.

The subsequent development of the natural industries of the country attracted male rather than female immigrants, and notwithstanding the equalizing tendency of the expanding factor of natural increase, and the heavy loss of males through the war, the population of Australia, on the 31st December, 1927, contained an excess of 2.32 males in every 100 persons.

The relation between the degree of development of a country and the masculinity of its population is exemplified by the conditions in the various Australian States. The table on page 884 shows that the greatest masculinity is associated with the smallest density of population, *i.e.*, the masculinity is greatest in the less developed States. For instance, in Queensland, which embraces over 22 per cent. of the area of Australia, but which holds only 14 per cent. of the total population (1.34 persons per sq. mile) the masculinity is 5.68, and in Western Australia, where the density of population is less (0.40 persons per sq. mile), the masculinity is greater (7.89). On the other hand, in Victoria, where the density is greatest (19.81 persons per sq. mile), there is an excess of females of 0.38 per 100 persons. In fact, if either Victoria or Tasmania be excluded, the masculinity indexes for all the other States will fall in reverse sequence to the indexes to density.

The position in South Australia is somewhat unusual, inasmuch as the people of that State are concentrated within a relatively small area, while a large portion of the area carries no population, and the masculinity, therefore, is governed by the density of the populated area.

(ii) *Masculinity.* On pages 163 to 165 in the second issue of this publication a table was included showing the masculinity of the population of each of the States for each year from 1796 to 1907. In the fifth issue, on page 123, the figures in this table for the years 1901 to 1907 were modified in accordance with the results of the Census of 3rd April, 1911.

The figures given in those tables showed the number of males to each 100 females, but it is considered that a more satisfactory index is obtained by computing the ratio of the excess of males over females to the total population. This ratio, expressed as a percentage, has been adopted as the "masculinity" of the population, and the ratios so computed are given hereunder for intervals of ten years from 1800 to 1910 and for the five years 1923 to 1927 :—

POPULATION.—MASCULINITY, 1800 TO 1927.

(Excess of Males over Females per 100 of Population.)

Year.	States.						Territories.		Australia.
	N.S.W.(*a*)	Victoria.	Q'land.	S.A.(*b*)	W. Aust.	Tasmania.	Northern (*c*)	Fed. Cap. (*d*)	
1800	44.91	..	..	..	..	..	..	..	44.91
1810	31.16	..	..	..	..	..	..	..	31.16
1820	41.81	..	..	..	..	..	..	..	41.81
1830	52.06	..	..	..	49.66	49.17	..	..	51.02
1840	34.25	..	..	13.08	24.10	39.31	..	..	33.72
1850	16.13	..	..	12.72	21.51	28.44	..	..	17.76
1860	13.53	22.74	19.88	2.47	25.07	10.56	..	..	16.72
1870	9.29	9.74	20.10	2.84	23.42	6.09	..	..	9.54
1880	9.28	4.95	17.53	6.69	14.92	5.53	..	..	7.95
1890	8.28	5.06	13.87	4.12	18.98	5.61	..	..	7.43
1900	5.28	0.61	11.24	1.98	22.34	3.83	76.57	..	5.01
1910	4.41	−0.65	8.69	1.54	14.13	2.03	65.89	..	3.79
1920	2.11	−1.33	5.66	−0.08	6.78	0.83	45.95	7.71	1.70
1923	2.03	−0.76	5.60	1.13	7.08	0.01	42.17	7.32	1.93
1924	2.09	−0.53	5.43	1.65	7.29	−0.32	41.12	9.61	2.05
1925	1.95	−0.39	5.63	2.53	7.26	−0.43	39.50	13.31	2.15
1926	1.93	−0.41	5.57	3.41	7.31	−0.98	42.28	14.61	2.20
1927	1.99	−0.38	5.68	3.60	7.89	−0.83	43.87	12.55	2.32

(*a*) Including Federal Capital Territory prior to 1911. (*b*) Including Northern Territory prior to 1900. (*c*) Included with South Australia prior to 1900. (*d*) Part of New South Wales prior to 1911.

Note.—The minus sign (—) denotes excess of females over males per 100 of persons.

The table shows the progress towards equalization of the sexes as the country developed, and conditions suitable to family life became more general.

The war naturally had a great effect on the masculinity of the population. In 1913 there was in Australia as a whole an excess of 4.41 males in every 100 persons, but by 1918 the excess was on the side of females to the extent of 0.96 per 100 persons. This excess of females was experienced in Victoria, South Australia, and Tasmania, but, largely by the return of the military forces, the excess of males was restored in all States except Victoria ; subsequent changes, however, brought about an excess of females over males in Tasmania.

Graphs showing the masculinity of the population of each State and of Australia accompany this chapter.

The difference between young and old countries in the masculinity of their populations is clearly illustrated by the comparisons furnished in the following table, which are based on the latest statistics available. It is interesting to note that of the countries named, Chile is the only non-European country with an excess of females :—

POPULATION OF VARIOUS COUNTRIES.—MASCULINITY.

Country.	Year.	Excess of Males over Females in each 100 of Population.	Country.	Year.	Excess of Males over Females in each 100 of Population.
Argentine Republic ..	1918	7.27	Denmark	1925	−2.39
Ceylon	1921	5.91	Norway	1920	−2.60
British India ..	1921	2.73	Hungary	1921	−2.97
India (Feudatory States)	1921	2.73	Prussia	1925	−3.00
Australia	**1927**	**2.32**	Spain	1920	−3.07
Union of South Africa(*a*)	1926	2.17	Northern Ireland ..	1926	−3.18
New Zealand ..	1927	2.11	Poland	1921	−3.37
United States of America	1920	1.98	Bavaria	1925	−3.42
Irish Free State ..	1926	1.38	German Empire ..	1925	−3.47
Japan	1926	1.01	Austria	1923	−3.65
Rumania	1919	0.75	Switzerland ..	1920	−3.69
Canada	1921	0.31	Scotland	1926	−3.84
Greece	1921	−0.52	Great Britain and Northern Ireland ..	1926	−4.20
Chile	1920	−0.57	England and Wales ..	1926	−4.28
Bulgaria	1924	−0.78	France	1921	−4.92
Belgium	1925	−1.19	Portugal	1920	−5.23
Finland	1923	−1.23	Netherlands ..	1923	−7.29
Italy	1921	−1.37	Russia (European) ..	1920	−9.56
Sweden	1926	−1.80			
Jugo-Slavia	1921	−1.92			

NOTE.—The minus sign (—) denotes excess of females over males in each 100 of population.
(*a*) White population only.

2. **Age Distribution.**—(i) *Australia.* The causes which brought about the excess of males also made the age constitution of the population of Australia essentially different from that of older countries. The high birth rate of the earlier years, coupled with the low average age of immigrants, produced a population in which young and middle-aged persons were above, and the persons of advanced ages were below, the normal proportions. With time, however, these differences have been modified, so that they are no longer important.

The following table shows the proportions in three main groups of ages, of the population of Australia over a period of 60 years in decennial periods from 1861, and of England and Wales for 1861, 1911 and 1921. The percentages are in all cases based on Census results. The Australian figures for 1861 include the results of the Western Australian Census of 1859, and those for 1871 include the results of the Western Australian and Tasmanian Censuses of 1870.

Throughout the period covered by the table, the age distribution of the Australian population has varied considerably in consequence of the fluctuations of the birth-rate and of net migration.

There is a steady approach to similarity in the age composition of males to that of females in harmony with the equalization of the numbers of each sex, and an increasing similarity in the composition of the Australian population to that of England and Wales.

POPULATION.—AGE DISTRIBUTION.

Census Year.	Males.				Females.				Persons.			
	Under 15 Years.	15 and under 65.	65 and over.	Total.	Under 15 Years.	15 and under 65.	65 and over.	Total.	Under 15 Years.	15 and under 65.	65 and over.	Total.
	AUSTRALIA, 1861 TO 1921.											
	%	%	%	%	%	%	%	%	%	%	%	%
1861..	31.41	67.42	1.17	100	43.03	56.20	0.77	100	36.28	62.72	1.00	100
1871..	38.84	59.11	2.05	100	46.02	52.60	1.38	100	42.09	56.17	1.74	100
1881..	36.37	60.85	2.78	100	41.89	56.07	2.04	100	38.91	58.65	2.44	100
1891..	34.77	62.02	3.21	100	39.36	58.08	2.56	100	36.90	60.20	2.90	100
1901..	33.87	61.82	4.31	100	36.50	59.85	3.65	100	35.12	60.88	4.00	100
1911..	30.84	64.82	4.34	100	32.52	63.28	4.20	100	31.65	64.08	4.27	100
1921..	31.64	63.88	4.48	100	31.79	63.83	4.38	100	31.71	63.86	4.43	100
	ENGLAND AND WALES, 1861, 1911, AND 1921.											
1861..	36.70	58.97	4.33	100	34.62	60.44	4.94	100	35.64	59.72	4.64	100
1911..	31.70	63.66	4.64	100	29.64	64.62	5.74	100	30.64	64.16	5.20	100
1921..	29.24	65.34	5.42	100	26.32	67.06	6.62	100	27.72	66.24	6.04	100

(ii) *States and Territories.* The disparity in sex distribution in the States is accompanied by a corresponding inequality in age distribution. For convenient comparison in respect to ages, the several populations may each be divided into groups, indicative of dependence on the one hand, and ability to support on the other. The usual division for this purpose is into an initial group of "under 15" classed as "dependent age," a second group of "15 and under 65" classed as "supporting age," and a final group of "65 and upwards" classed "old age." From certain points of view the division might be into two classes, the "supporting" and the "dependent," as the majority of those aged "65 and upwards" strictly belong to the dependent class. The number and proportion of persons in each State and Territory at the Census of 4th April, 1921, in each of the three groups mentioned, were as follows :—

POPULATION.—DEPENDENT, SUPPORTING, AND OLD AGE GROUPS, 4th APRIL, 1921.

State or Territory.	Number of Persons of—				Proportion of Population of—		
	Dependent age (under 15).	Supporting age (15 and under 65).	Old age (65 and upwards).	All ages.	Dependent age (under 15).	Supporting age (15 and under 65).	Old age (65 and upwards).
States—					%	%	%
New South Wales	677,770	1,332,214	90,387	2,100,371	32.26	63.42	4.32
Victoria ..	455,640	1,002,050	73,590	1,531,280	29.76	65.43	4.81
Queensland ..	251,445	474,160	30,367	755,972	33.27	62.71	4.02
South Australia	156,560	313,318	25,282	495,160	31.63	63.26	5.11
Western Australia	107,390	214,508	10,834	332,732	32.27	64.47	3.26
Tasmania ..	73,420	130,279	10,081	213,780	34.34	60.95	4.71
Territories—							
Northern ..	806	2,859	202	3,867	20.84	73.94	5.22
Federal Capital	847	1,648	77	2,572	32.93	64.07	3.00
Australia ..	1,723,878	3,471,036	240,820	5,435,734	31.71	63.86	4.43

Victoria has the highest proportion of the population in the "supporting" age-group, while Tasmania has the lowest proportion. This high proportion in Victoria is largely due to the relatively low birth-rate in that State during the years which produced the lives under 15 years at the Census of 1921. The relatively small proportion of the population in the age group 15–65 in Tasmania is due to the fact that many Tasmanians, in their early adult years, seek the wider opportunities available on the mainland.

POPULATION.—IN AGE GROUPS, 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

Age last Birthday.	States.						Territories.		Australia.
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern.	Fed. Cap.	
0– 4 ..	239,340	155,636	90,148	53,902	34,977	25,546	331	326	600,206
5– 9 ..	233,424	157,132	86,655	54,798	37,884	25,283	289	293	595,758
10–14 ..	205,600	143,168	74,783	47,936	34,533	22,615	184	221	529,040
15–19 ..	175,178	130,609	65,470	41,183	29,668	19,851	186	278	462,428
20–24 ..	172,086	129,599	66,317	40,238	25,769	17,772	285	245	452,311
25–29 ..	178,516	132,492	65,728	42,308	24,429	16,701	329	215	460,718
30–34 ..	180,372	122,683	62,858	41,261	24,296	15,562	345	238	447,615
35–39 ..	155,623	104,486	51,707	36,710	22,922	13,737	258	194	385,637
40–44 ..	129,060	92,799	43,321	29,880	22,885	11,858	262	151	330,216
45–49 ..	105,450	81,934	36,193	23,981	21,477	9,948	251	123	279,357
50–54 ..	91,822	80,565	32,513	22,096	18,444	9,247	295	74	255,056
55–59 ..	76,911	70,764	26,921	18,582	13,363	8,183	273	85	215,082
60–64 ..	62,105	53,676	20,925	15,874	8,967	6,867	229	61	168,704
65–69 ..	39,868	30,771	13,289	10,981	5,122	4,408	128	37	104,604
70–74 ..	25,047	19,239	8,152	6,790	2,955	2,697	53	13	64,946
75–79 ..	15,128	12,241	5,040	4,211	1,605	1,621	12	15	39,873
80–84 ..	6,769	6,822	2,610	2,100	684	887	3	4	19,879
85–89 ..	2,548	3,008	840	857	248	325	2	3	7,831
90 and over	664	988	214	252	53	91	..	1	2,263
Unspecified	4,860	2,668	2,288	1,220	2,451	581	142	..	14,210
Total ..	2,100,371	1,531,280	755,972	495,160	332,732	213,780	3,867	2,572	5,435,734
Under 21..	889,082	613,454	330,556	206,070	142,801	97,181	1,060	1,183	2,281,387
21 and over	1,206,429	915,158	423,128	287,870	187,480	116,018	2,665	1,389	3,140,137
Unspecified	4,860	2,668	2,288	1,220	2,451	581	142	..	14,210
Total ..	2,100,371	1,531,280	755,972	495,160	332,732	213,780	3,867	2,572	5,435,734

3. Race and Nationality.—(i) *General.* With regard to its racial characteristics, the population of Australia may be divided into two main groups, one comprising the aboriginal natives, and the other consisting of the various immigrant races which have made the country their home. [It will of course be understood that full-blood aboriginals are not counted in the population.] The term "immigrant races" naturally covers not only those residents of Australia who were born in other countries, but includes their descendants who were born in Australia.

(ii) *Aboriginals.* (*a*) *Early Estimates of Numbers.* The number of aboriginals in Australia at the advent of the white race has been estimated by various observers at somewhere in the vicinity of 150,000, but this figure must be regarded as a very rough approximation only.

(*b*) *Various Estimates from 1826 to 1921.* In 1826 the native black population in the settled districts of New South Wales numbered 3,019, this figure, however, offering little indication of the total for the whole State.

In Victoria an enumeration of the aboriginals in the settled districts in 1861 gave a total of 2,384, while at the Census of 1871, 1,330 were enumerated. In New South Wales 983 were counted in 1871 who were more or less in contact with white settlers, and it was estimated that 12,000 others were living in a wild and wandering condition.

At the Census of 1881 the aboriginals recorded in Victoria had dwindled to 780. In New South Wales the number enumerated was 1,643, while the unenumerated were estimated at 10,000. In South Australia (exclusive of the Northern Territory) the number counted and estimated was 6,346. In Queensland officers of the Police Department supplied an estimate of 20,585.

At the Census of 1891 the number in Victoria had decreased to 317. In New South Wales, where the first complete enumeration of the blacks was made, the number was returned as 5,097. In Western Australia 5,670 were enumerated, this figure, however, excluding natives not in contact with white settlers.

At the Census of 1911, 19,939 aboriginals were recorded for the whole of Australia, the figure again being exclusive of natives in unsettled areas.

At the Census of 1921 special efforts were made to obtain a reliable indication of the number of aboriginals living in the various States, including wild and wandering natives, as well as those in contact with the whites. Great difficulty was experienced in gaining anything like a reliable estimate in regard to the numbers of those in a wild state in Western Australia, the Northern Territory, and Queensland. The estimates gave a total of 60,300, distributed as follows:—New South Wales, 1,597; Victoria, 144; Queensland, 14,014; South Australia, 1,609; Western Australia, 25,587; Northern Territory, 17,349. (It may be mentioned here that the last representative of the Tasmanian aboriginals died in 1876.)

(c) *Census of Aboriginals in 1927.* A census of the aboriginal population taken in 1927 gave the following results:—

CENSUS OF ABORIGINALS, 30th JUNE, 1927.

Description.	New South Wales.		Victoria.		Queensland.		South Australia.		Western Australia.		Northern Territory.		Total.	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
							FULL-BLOODS.							
Adults—														
Nomadic ..	..	..	3	3	1,217	1,054	627	579	2,883	2,464	6,554	5,291	11,284	9,391
Regular Employment ..	..	..	..	..	2,283	558	319	173	2,339	1,817	1,350	785	6,291	3,333
Supervised Camps ..	..	..	26	16	2,294	2,325	65	35	815	825	679	639	3,879	3,840
Not stated ..	409	285	..	..	307	326	..	..	11	28	..	..	727	639
Children—														
Nomadic ..	..	..	..	..	361	341	170	140	448	393	2,206	1,886	3,185	2,760
Regular Employment ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Supervised Camps ..	..	..	5	3	990	986	1	4	183	164	385	357	1,564	1,514
Not stated ..	131	139	..	..	260	221	22	14	348	277	77	49	838	700
Total ..	540	424	34	22	7,712	5,811	1,204	945	a12,027	a10,968	11,251	9,007	32,768	27,177
Persons ..	964		56		13,523		2,149		22,995		20,258		59,945	
							HALF-CASTES.							
Adults—														
Nomadic ..	..	..	37	28	133	70	101	151	216	165	33	24	520	438
Regular Employment ..	..	..	47	32	626	340	234	122	425	325	193	143	1,525	962
Supervised Camps ..	..	..	54	63	407	521	162	141	119	160	2	41	744	926
Not stated ..	1,659	1,274	18	20	91	114	..	..	7	53	..	..	1,775	1,461
Children—														
Nomadic ..	..	..	20	18	58	52	159	144	133	123	31	26	401	363
Regular Employment ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Supervised Camps ..	..	..	64	19	527	503	140	145	151	164	83	83	965	944
Not stated ..	1,490	1,406	32	24	382	386	30	25	281	265	61	62	2,276	2,168
Total ..	3,149	2,680	272	234	2,224	1,986	826	728	1,332	1,255	403	379	8,206	7,262
Persons ..	5,829		506		4,210		1,554		2,587		782		15,468	

(a) Including 5,000 estimated as living outside the influence of Europeans.

NOTE.—In the case of aboriginals, all those twelve years of age and over are counted as adults, and the balance as children.

The figures for 1927 show a small decrease from the total for 1921. Except in a few places where the blacks are under missionary influence, the numbers generally tend to decline, and the figures for New South Wales and Victoria, which are probably the most reliable, certainly evidence a rapid decline since the foundation of white settlement.

(*d*) *Decline in Numbers since 1891.* As evidence of the decline alluded to in the previous sub-section, a table is appended showing the numbers in the States of New South Wales and Victoria from 1891 onwards :—

NEW SOUTH WALES AND VICTORIA.—FULL-BLOOD ABORIGINALS, 1891 TO 1927.

State.	1891.	1901.	1911.	1921.	1926.	1927.
New South Wales ..	5,097	3,778	2,012	1,597	1,031	964
Victoria	317	250	196	144	55	56

The figures refer to full-blood aboriginals actually enumerated at the dates mentioned.

(iii) *Immigrant Races.* The immigrant races consist mainly of natives of the British Isles and their descendants. Of the total population (5,435,734) enumerated at the Census of 1921, 5,387,143, or over 99 per cent., were of European race. Of the remainder, 30,975 were full-blood, and 17,616 were half-caste non-Europeans.

The Census figures included all persons on board ships which were in Australian waters on the night of the Census, and 4,576 persons of full-blood and 49 half-castes of non-European race were thus enumerated. Amongst the 4,576 full-bloods were 1,018 Chinese, 1,330 Japanese, 942 Hindus, and 623 Malays.

The following table shows the number of full-blood and half-caste persons of non-European race—according to continental divisions—who were included in the Census of 1921. Of the 28,215 full-blood Asiatics, 17,157 were Chinese, 2,881 Hindus, 2,892 Syrians, 2,740 Japanese, and 1,087 Malays. The number of full-blood non-Europeans enumerated at the Census of 1921 was less than in 1911 by 6,814, or 18.03 per cent., whereas the half-caste non-Europeans had increased by 3,062, or 21.03 per cent. During the intercensal period the number of full-blood Chinese declined by 5,596, Japanese by 749, and Hindus by 418. The non-European element is relatively strongest in those parts of Australia where there are bêche-de-mer and pearl fisheries. More detailed information relating to the non-European races in the Australian population may be found in the Census Bulletins and Parts :—

POPULATION.—NON-EUROPEAN RACES, CENSUS, 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

States and Territories.	Australian.	Asiatic.		African.		American.		Polynesian.		Indefinite.		Total.	
	Half-caste Aboriginals.	Full-blood.	Half-caste.	Full-blood	Half-caste.	Full-blood	Half-caste	Full-blood	Half-caste.	Full-blood	Half-caste.	Full-blood.	Half-caste.
States—													
N.S. Wales ..	4,588	10,608	2,081	72	116	31	35	332	162	38	7	11,081	6,989
Victoria ..	442	4,292	1,255	15	40	8	19	8	8	23	1	4,346	1,765
Queensland ..	3,090	7,122	1,453	42	27	25	21	1,869	247	155	6	9,213	4,844
S. Australia ..	811	1,210	224	13	5	17	4	..	2	56	2	1,296	1,048
W. Australia	1,960	3,734	242	13	7	14	7	10	4	3	3	3,774	2,223
Tasmania ..	152	327	78	1	..	..	..	..	2	1	..	329	232
Territories—													
Northern ..	460	913	21	3	..	..	..	7	1	4	..	927	482
Federal Capital	33	9	..	..	..	..	..	..	..	..	..	9	33
Australia ..	11,536	28,215	5,354	159	195	95	86	2,226	426	280	19	30,975	17,616

The proportion of population of non-European race (exclusive of full-blood aboriginals) in each State and Territory is shown in the following table, full-blood and half-caste non-Europeans being shown separately :—

POPULATION.—NON-EUROPEAN RACES, PROPORTIONS, CENSUS, 4th APRIL, 1921.

(Exclusive of Full-blood Aboriginals.)

States and Territories.	Total Population.	Non-European Race.					
		Full-blood.		Half-caste.		Total.	
		Number.	Number per 1,000 of Total Population.	Number.	Number per 1,000 of Total Population.	Number.	Number per 1,000 of Total Population.
States—							
N.S. Wales ..	2,100,371	11,081	5.27	6,989	3.33	18,070	8.60
Victoria ..	1,531,280	4,346	2.84	1,765	1.15	6,111	3.99
Queensland ..	755,972	9,213	12.19	4,844	6.41	14,057	18.60
S. Australia ..	495,160	1,296	2.62	1,048	2.11	2,344	4.73
W. Australia	332,732	3,774	11.34	2,223	6.67	5,997	18.01
Tasmania ..	213,780	329	1.54	232	1.09	561	2.63
Territories—							
Northern ..	3,867	927	239.70	482	124.64	1,409	364.34
Fed. Capital	2,572	9	3.50	33	12.83	42	16.33
Australia ..	5,435,734	30,975	5.70	17,616	3.24	48,591	8.94

(iv) *Biological and Sociological Significance.* The population of Australia is fundamentally British in race and nationality, and furnishes an example of the transplanting of a race into conditions greatly different from those in which it had been developed. The biological and sociological significance of this will ultimately appear in the physical and moral constitution produced by the complete change of climatic and social environment. The new conditions are likely to modify considerably the physical characteristics and the social instincts of the constituents of the population. At present, the characteristics of the Australian population, whether physical, mental, moral, or social, are only in the making, and probably a distinct Australian type will not appear until three or four generations more have passed. Even then, it is probable that, with the great extent of territory and differing conditions there will be a number of types varying with locality. At present the Australian is little more than a transplanted Briton, with the essential characteristics of his British forbears, with perhaps some accentuation of the desire for freedom from restraint. The greater opportunity for an open-air life. and the absence of the restricting conventions of older countries, may be mainly responsible for this development.

(v) *Nationality.* Prior to the Census of 1921 no attempt had been made to ascertain the allegiance of the people, except in so far as a person was or was not a British subject. At the last Census all persons were asked to state their nationality, and the results which are given in the following table, show that of a total population of 5,435,734, as many as 5,387,205, or over 99 per cent., were definitely stated to be British subjects. Of the foreign element, the Chinese were the most numerous, representing 30 per cent. of the foreign people and 2.56 in every 1,000 of the total population :—

POPULATION.—NATIONALITY (ALLEGIANCE), AUSTRALIA, CENSUS, 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

Nationality.	4th April, 1921. Males.	4th April, 1921. Females.	4th April, 1921. Persons.	Nationality.	4th April, 1921. Males.	4th April, 1921. Males.	4th April, 1921. Persons.
British	2,722,152	2,665,053	5,387,205	Foreign—*continued.*			
				Jugo-Slavian ..	502	107	609
Foreign—				Norwegian ..	960	65	1,025
Austrian ..	217	40	257	Polish	351	149	500
Belgian ..	171	106	277	Russian ..	1,655	662	2 317
Bulgarian ..	56	10	66	Spanish ..	405	140	545
Chinese ..	13,614	185	13,799	Swedish ..	1,399	80	1,479
Czecho-Slovakian	97	22	119	Swiss	413	151	564
Danish ..	956	260	1,216	Turkish ..	72	26	98
Dutch ..	1,430	187	1,617	U.S. of America..	2,520	737	3,257
Finnish ..	517	37	554	Other	1,042	376	1,418
French ..	1,221	867	2,088				
German ..	2,538	1,017	3,555	Total Foreign..	39,067	6,687	45,754
Greek ..	2,430	387	2,817				
Hungarian ..	28	7	35	Not stated ...	1,651	1,124	2,775
Italian ..	3,984	919	4,903				
Japanese ..	2,489	150	2,639	Grand Total..	2,762,870	2,672,864	5,435,734

(vi) *Birthplaces.* The proportion of native-born in the Australian population has increased rapidly in recent years. At the Census of 1921 the Australian-born numbered 4,581,663 persons, or 84.51 per cent. of a total population of 5,421,242 persons whose birthplaces were specified. Of the remainder, 676,387, or 12.48 per cent., were natives of the British Isles, and 38,611, or 0.71 per cent., were natives of New Zealand, so that 97.70 of the total population at that time had been born either in Australasia or in the British Isles. Excluding these, the following countries are the most important recorded as the birthplaces of persons in Australia at the Census of 1921 :—

Germany, 22,396 (0.41 per cent.); China, 15,224 (0.28 per cent.); Scandinavia (comprising Sweden, Norway, and Denmark), 14,341 (0.26 per cent.); Italy, 8,135 (0.15 per cent.); British India, 6,918 (0.13 per cent.); United States of America, 6,604 (0.12 per cent.); Union of South Africa, 5,408 (0.10 per cent.); Canada, 3,550 (0.07 per cent.)

The Australian-born element is lowest in Western Australia and Queensland, where the density of population is also least, but where the masculinity is greatest. On the other hand, in Tasmania, where the density is high and the masculinity is low, the proportion of Australian-born is highest. These related facts indicate that conditions throughout these territorially larger but less developed States hitherto have been, on the whole, less attractive to women and less conducive to the rearing of families than the conditions existing in the more settled States.

Information in greater detail respecting birthplaces will be found in Bulletins and other matter published in connexion with the Census of 1921.

POPULATION.—BIRTHPLACES AT CENSUS OF 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

Birthplace.	States. N.S.W.	States. Victoria.	States. Q'land.	States. S. Aust.	States. W. Aust.	States. Tas.	Territories. Northern.	Territories. Fed. Cap.	Australia.
					PERSONS.				
Australia ..	1,772,614	1,330,136	592,163	436,991	248,866	196,245	2,536	2,112	4,581,663
New Zealand ..	19,266	11,210	2,949	1,218	2,540	1,360	41	27	38,611
British Isles ..	260,426	161,117	128,234	46,326	66,739	12,750	410	385	676,387
Other European Countries ..	19,948	13,266	20,064	6,371	7,256	951	168	18	68,042
Asia	11,036	5,218	6,745	1,518	4,410	711	638	16	30,292
Africa	2,769	2,004	741	473	577	192	16	3	6,775
America ..	5,244	3,022	1,763	754	971	279	34	5	12,072
Polynesia (*a*) ..	1,882	354	1,218	82	85	58	8	5	3,692
At Sea ..	1,283	1,111	589	394	234	92	4	1	3,708
Unspecified ..	5,903	3,842	1,506	1,033	1,054	1,142	12	..	14,492
Total ..	2,100,371	1,531,280	755,972	495,160	332,732	213,780	3,867	2,572	5,435,734

(*a*) Includes Norfolk Island, Papua and the Territory of New Guinea.

POPULATION.—BIRTHPLACES AT CENSUS OF 1921—*continued.*

Birthplace.	States.						Territories.		Australia.
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern.	Fed. Cap.	
PERCENTAGE OF TOTAL POPULATION.									
	%	%	%	%	%	%	%	%	%
Australia ..	84.64	87.08	78.49	88.44	75.03	92.29	65.78	82.12	84.51
New Zealand ..	0.92	0.74	0.39	0.25	0.77	0.64	1.06	1.05	0.71
British Isles ..	12.43	10.55	17.00	9.37	20.12	6.00	10.64	14.97	12.48
Other European Countries ..	0.95	0.87	2.66	1.29	2.19	0.45	4.36	0.70	1.26
Asia ..	0.53	0.34	0.89	0.31	1.33	0.33	16.55	0.62	0.56
Africa ..	0.13	0.13	0.10	0.09	0.17	0.09	0.42	0.12	0.12
America ..	0.25	0.20	0.23	0.15	0.29	0.13	0.88	0.19	0.22
Polynesia(*a*) ..	0.09	0.02	0.16	0.02	0.03	0.03	0.21	0.19	0.07
At Sea ..	0.06	0.07	0.08	0.08	0.07	0.04	0.10	0.04	0.07
Total ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

(*a*) Includes Norfolk Island, Papua, and the Territory of New Guinea.

(vii) *Length of Residence of Immigrants.* At the Census of 1921 the population of Australia included 839,579 persons who were classed as immigrants, and the following table shows the number of years during which these people had resided in Australia. The number of persons whose length of residence is shown as less than one year is necessarily large, as it includes many persons, such as the crews of oversea ships, travellers, and others, who did not intend to remain in the country. The variations in the numbers with different periods of residence show the fluctuations in the volume of immigration. Thus the figures for length of residence groups 5–9 years and 10–14 years include those persons who arrived in Australia during the years 1911–1913 when immigration was large, those for the groups 30–44 years represent the arrivals during the boom period of the eighties of last century, while those for the groups 65–74 represent the survivors of the gold rush of the fifties.

POPULATION.—IMMIGRANT—LENGTH OF RESIDENCE IN AUSTRALIA, CENSUS, 4th APRIL, 1921.

Number of Completed Years of Residence.	Males.	Females.	Persons.	Number of Completed Years of Residence.	Males.	Females.	Persons.
0	28,386	19,827	48,213	60–64	10,372	11,671	22,043
1	8,375	16,998	25,373	65–69	11,378	13,594	24,972
2	2,026	2,490	4,516	70–74	2,875	3,669	6,544
3	1,715	1,404	3,119	75–79	716	935	1,651
4	2,779	2,623	5,402	80–84	519	693	1,212
5–9	111,895	87,723	199,618	85–89	78	124	202
10–14	58,919	31,883	90,802	90–94	16	15	31
15–19	15,077	7,818	22,895	95 and upwards ..	1	—	1
20–24	18,875	8,990	27,865	Not stated ..	13,903	12,050	25,953
25–29	16,873	10,721	27,594				
30–34	47,206	32,273	79,479	Total ..	480,618	358,961	839,579
35–39	56,144	38,272	94,416	Born in Australia ..	2,273,999	2,307,664	4,581,663
40–44	31,843	20,851	52,694	Birthplace not stated	8,253	6,239	14,492
45–49	16,616	11,776	28,392				
50–54	10,954	9,649	20,603	Total Population	2,762,870	2,672,864	5,435,734
55–59	13,077	12,912	25,989				

Further details are available from the Bulletins and Parts published in connexion with the Census of 1921.

4. Education.—(i) *General.* The information concerning educational attainments which can be satisfactorily collected at a Census is necessarily meagre. In Australia the particulars ascertained have never amounted to more than a statement as to whether or not a person could read and write. The results, therefore, merely divide the population into three main groups, viz. :—(*a*) Those who cannot read ; (*b*) those who can read but cannot write ; and (*c*) those able to read and write. Of the 5,435,734 persons who comprised the population of Australia on the 4th April, 1921, there were 805,798 who were definitely shown to be unable to read, and there were 86,641 persons whose ability in this direction was not stated. Thus, approximately 15 per cent. of the population were unable to read. Of the 805,798 persons returned as unable to read, 600,206, or 74.5 per cent., were under five years of age, and many of the remaining 25.5 per cent. were also children. Allowing for those persons whose ability to read and write was unspecified, it may be said that over 95 per cent. of the population over five years of age can read and write, and of those over ten years of age more than 98 per cent. can read and write. The number of persons returned at the Census of 1921 as able to read but unable to write was 14,493, of whom 943 could read a foreign language only. With the exception of New Zealand, there is probably no country in the world so strikingly unilingual as Australia.

POPULATION.—EDUCATION, CENSUS OF 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

States and Territories.	English Language.		Foreign Language only.		Cannot Read.		Un-specified.	Australia.
	Read and Write.	Read only.	Read and Write.	Read only.	Under age 5 years.	Age 5 years and over.		
STATES—								
New South Wales ..	1,725,326	5,291	4,190	296	239,340	92,858	33,070	2,100,371
Victoria	1,309,334	2,838	2,558	230	155,636	39,971	20,713	1,531,280
Queensland ..	619,447	2,621	4,502	288	90,148	28,897	10,069	755,972
South Australia ..	411,256	1,476	1,030	64	53,902	18,046	9,386	495,160
Western Australia ..	273,079	743	2,485	57	34,977	13,224	8,167	332,732
Tasmania	170,743	566	120	5	25,546	11,796	5,004	213,780
TERRITORIES—								
Northern	2,331	7	325	3	331	657	213	3,867
Federal Capital ..	2,069	8	7	..	326	143	19	2,572
Australia ..	4,513,585	13,550	15,217	943	600,206	205,592	86,641	5,435,734

(ii) *Place of Education.* At the Census of 1921 the place of instruction was given for 1,023,462 persons, and of these 74.93 per cent. were attending State schools, 18.93 per cent. were at private schools, 2.43 per cent. at technical schools, 3 per cent. were receiving instruction at home, and 7 per thousand were attending universities. Of the males receiving instruction, 75.85 per cent. were at State schools, and 17.04 per cent. were at private schools; of the females 73.96 per cent. were at State schools and 20.90 per cent. at private schools.

POPULATION.—PLACE OF EDUCATION, CENSUS, 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

States and Territories.	Number being educated at—					Total.
	State School.	Private School.	Technical School.	University.	At Home.	
STATES—						
New South Wales	291,365	77,553	8,906	2,934	13,181	393,939
Victoria	203,625	59,788	8,097	2,663	5,772	279,945
Queensland	116,050	23,457	3,012	261	6,163	148,943
South Australia	72,397	14,382	1,599	990	2,042	91,410
Western Australia	50,356	12,299	2,585	267	1,932	67,439
Tasmania	32,459	6,204	512	137	1,540	40,852
TERRITORIES—						
Northern	239	58	..	..	50	347
Federal Capital	350	33	172	..	32	587
Australia	766,841	193,774	24,883	7,252	30,712	1,023,462

5. **Religions.**—At the Census of the 4th April, 1921, of a total population of 5,435,734, the number who objected to state their religion was 46,268; a further number of 45,990 failed to specify their religion in any degree; 20,544 stated that they had no religion;

and 19,886 classed themselves in indefinite groups, such as "Freethinker," "Agnostic," "No Denomination," etc. Of those remaining (5,303,046), 5,267,641, or 99.33 per cent., were definitely stated to be Christians, and 35,405 were stated to be Non-Christians. The number who were definitely stated to be Christians represented nearly 97 per cent. of the total population. Of the total Christians, 2,372,995, or 45.04 per cent., belonged to the Church of England; 1,134,002, or 21.53 per cent., to the Roman Catholic Church; 636,974, or 12.09 per cent., to the Presbyterian Church; and 632,629, or 12.01 per cent., were Methodists. Thus, the four denominations named embraced over 90 per cent. of the declared Christians. It is possible that the number given above for Roman Catholics may be somewhat understated, as some of those shown in the table as "Catholic undefined" were doubtless Roman Catholics.

POPULATION OF AUSTRALIA, CENSUSES OF 1901, 1911, AND 1921, ACCORDING TO RELIGION.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

RELIGION.	Census of 31st March, 1901.	Census of 3rd April, 1911.	Census of 4th April, 1921.
I. CHRISTIAN—			
Baptist	89,338	97,074	105,703
Catholic, Roman ..	850,620	921,425	1,134,002
Catholic, Greek ..	1,314	2,646	5,372
Catholic, Undefined	5,179	75,379	38,659
Church of Christ ..	24,192	38,748	54,574
Church of England ..	1,497,576	1,710,443	2,372,995
Congregational Independent	73,561	74,046	74,513
Lutheran	75,021	72,395	57,519
Methodist ..	504,101	547,806	632,629
Presbyterian ..	426,105	558,336	636,974
Protestant, Undefined	20,558	109,861	67,112
Salvation Army ..	31,100	26,665	31,589
Seventh Day Adventist	3,332	6,095	11,305
Unitarian	2,620	2,175	1,714
Others	21,823	31,320	42,981
Total, Christian ..	3,626,449	4,274,414	5,267,641
II. NON-CHRISTIAN—			
Hebrew	15,239	17,287	21,615
Buddhist ..	35,666	3,269	2,065
Chinese ..		3,283	3,591
Confucian		5,194	2,692
Mohammedan		3,908	2,868
Pagan ..		1,447	457
Others, Non-Christian	2,466	2,397	2,117
Total, Non-Christian	53,371	36,785	35,405
III. INDEFINITE—			
Freethinker ..	9,182	3,254	3,629
Agnostic	971	3,084	3,234
No Denomination ..	19,757	2,688	3,376
Others	1,101	5,647	9,647
Total	31,011	14,673	19,886
IV. NO RELIGION—			
Atheist	274	579	1,200
Others	6,505	9,437	19,344
Total	6,779	10,016	20,544
V. OBJECT TO STATE ..	42,131	83,003	46,268
VI. UNSPECIFIED ..	14,060	36,114	45,990
GRAND TOTAL ..	3,773,801	4,455,005	5,435,734

6. Conjugal Condition.—The number of persons whose conjugal condition was definitely stated at the Census of 4th April, 1921, was 5,421,191, of whom 2,753,740 were males and 2,667,451 were females. Of the 5,421,191 persons referred to, 1,998,662, or 36.86 per cent., were married, as compared with 33 per cent. in 1911; 237,821, or 4.39 per cent., were widowed; 8,528, or 0.15 per cent., were divorced; and 3,176,180, or 58.60 per cent., had never married. Of those who had never married, 1,725,004, or 54.31 per cent., were under 15 years of age. The proportion of married persons per cent. to the total population of the several States varied in the following order:—South Australia, 38.14; New South Wales, 37.40; Western Australia, 36.85; Victoria, 36.63; Tasmania, 35.88; and Queensland, 35.32. On the basis of the adult population, the percentage of married persons in Australia was about 63.36, and in each State was approximately as follows:—Tasmania, 65.66; South Australia, 65.31; New South Wales, 64.78; Western Australia, 64.16; Queensland, 62.65; and Victoria, 60.99.

POPULATION.—CONJUGAL CONDITION, CENSUS, 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

Conjugal Condition.	States.						Territories.		Australia
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern.	Fed. Cap.	
Never married—									
Under age 15 ..	678,364	455,936	251,586	156,636	107,394	73,444	804	840	1,725,004
Age 15 and over	540,267	434,010	206,632	126,301	87,241	54,297	1,709	719	1,451,176
Total never married	1,218,631	889,946	458,218	282,937	194,635	127,741	2,513	1,559	3,176,180
Married	783,730	559,677	266,307	188,798	121,635	76,482	1,076	957	1,998,662
Widowed ..	88,552	76,207	29,040	21,919	13,054	8,874	121	54	237,821
Divorced ..	4,609	2,313	488	384	610	118	5	1	8,528
Unspecified ..	4,849	3,137	1,919	1,122	2,798	565	152	1	14,543
Total ..	2,100,371	1,531,280	755,972	495,160	332,732	213,780	3,867	2,572	5,435,734

7. **Occupations.**—(i) *General.* The following table shows, for each State and Territory, and for Australia as a whole, the population grouped according to the various classes of occupations. The bulletins which have been published in connexion with the Census of 1921 give, in greater detail than is possible here, the occupations of the people of each State and Australia, and give comparisons of the results of the Censuses of 1911 and 1921.

(ii) *Breadwinners.* After distributing the number of persons whose occupations were not specified there were at the Census of 1921, 2,322,471 breadwinners, representing 42.7 per cent. of the total population. At the Census of 1911, the breadwinners represented 45 per cent. of the population. Of the total male population, 67.25 per cent. were breadwinners in 1921, as compared with 69.4 per cent. in 1911. Of the female population the percentage of breadwinners was 17.4 in 1921, and 18.6 in 1911. The proportion of females to the total of breadwinners was almost identical at both periods, being about 20 per cent.

(iii) *Industrial.* The decade 1911-1921 marks an interesting phase in the industrial development of Australia, inasmuch as, during that period, the persons engaged in manufacturing and other construction work became more numerous than those engaged in primary production. In 1911, the Industrial Class already had first place in New South Wales, Victoria and South Australia, but in the other States the predominance of the Primary Class was such that, for Australia as a whole, the Primary Class was the greater. In 1921, the preponderance of the Industrial Class in New South Wales, Victoria, and South Australia had increased to such an extent, and at the same time the excess in favour of the primary industries, though still existent in Queensland, Western Australia, and Tasmania, had so diminished, that the number of persons engaged in industrial occupations throughout Australia exceeded those in the primary industries by 126,066, or by nearly 21 per cent. In 1911 the primary industries employed 39,711 persons, or 7.0 per cent., more than were employed in the industrial group. Of the total of 2,322,471 breadwinners in 1921, 725,816, or 31.2 per cent., belonged to the Industrial Class, as compared with 569,132, or 28.4 per cent., of all breadwinners in 1911. The principal group within the Industrial Class is composed of the manufacturing industries. During the intercensal period, the number of persons engaged in manufacturing industries increased from 367,939, or 18.4 per cent., of all breadwinners in 1911, to 442,598, or 19 per cent., of breadwinners in 1921, an increase of 74,659, or 20.3 per cent.

(iv) *Primary Producers.* As mentioned in the preceding paragraph, the primary producers have ceased to be the most numerous of the occupational classes. In 1911 the primary producers numbered 608,843, or 30.4 per cent., of all breadwinners, while the number decreased to 599,750, representing only 25.8 per cent. of the breadwinners in 1921. The number of persons engaged in Agriculture increased by 14.3

per cent. from 295,710 to 338,088. This increase in numbers however represents a relative decline of about two per thousand of all breadwinners. The number engaged in the Pastoral Industries declined from 157,967 to 142,349, or by nearly 10 per cent. The number engaged in Mining was less in 1921 by 42,866, or 39 per cent., having fallen to 66,882 from 109,748, in 1911. Those engaged in Forestry and in connexion with Water Supply, though still relatively few, increased substantially—the former by 20 per cent., and the latter by 48 per cent.

(v) *Commercial.* The number of persons recorded as engaged in commercial pursuits in Australia as a whole increased by 22.1 per cent. during the intercensal decade, the increases in the various States ranging from about 15½ per cent. in Victoria to 29 per cent. in New South Wales. This class represented 15.3 per cent. of all breadwinners in Australia in 1921, as against 14.5 per cent. in 1911. The similar proportions in the various States in 1921 were :—New South Wales, 15.7 per cent. ; Victoria, 16.1 per cent. ; Queensland, 13.3 per cent. ; South Australia, 16 per cent. ; Western Australia, 14.9 per cent. ; and Tasmania, 12.2 per cent.

(vi) *Domestic.* Notwithstanding an increase in the number in the Domestic Class from 202,925 in 1911 to 210,362 in 1921, the class relatively to the total breadwinners declined from 10.1 per cent. in 1911 to 9.1 per cent. in 1921. For Australia as a whole the number in the Domestic Class increased by 7,437, of whom 6,203 were females. The number in this class was actually less in 1921 in Victoria by 7 per cent., and in Tasmania by 8.8 per cent, than in 1911, while in the other States the increases varied from 3.0 per cent. in Western Australia to 11.2 per cent. in New South Wales.

(vii) *Transport and Communication.* The number of persons employed in connexion with transport and communication increased from 158,854, or 8 per cent., of all breadwinners in 1911, to 208,222, or 9 per cent. in 1921.

(viii) *Professional.* The Professional Class embraces all persons, not otherwise classed, who are mainly engaged in government and defence, and in ministering to the moral, intellectual, and social wants of the community. The number of persons in this class increased from 146,603 in 1911 to 201,887 in 1921, or by 37.7 per cent. The Professional Class represented 8.7 per cent. of all breadwinners in 1921, as compared with 7.3 per cent. in 1911.

POPULATION.—OCCUPATIONS, CENSUS OF 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

Occupation.	States.						Territories.		Australia
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern.	Fed. Cap.	
Class									
I. Professional..	78,004	60,732	26,081	15,898	13,493	6,957	165	557	201,887
II. Domestic ..	81,858	58,291	28,818	19,660	14,145	7,306	213	71	210,362
III. Commercial..	139,044	108,190	43,149	32,936	21,959	10,263	190	36	355,767
IV. Transport and Communication ..	84,719	53,445	29,833	19,507	14,321	6,085	270	42	208,222
V. Industrial ..	285,665	234,829	85,623	63,640	32,794	22,603	457	205	725,816
VI. Primary Producers ..	208,936	147,514	109,719	52,658	49,399	29,911	1,298	315	599,750
VII. Independent	8,099	7,691	2,025	1,226	815	810	1	..	20,067
Total Breadwinners	886,325	670,692	325,248	205,525	146,926	83,935	2,594	1,226	2,322,471
VIII. Dependents..	1,214,046	860,588	430,724	289,635	185,806	129,845	1,273	1,346	3,113,263
Total ..	2,100,371	1,531,280	755,972	495,160	332,732	213,780	3,867	2,572	5,435,734

(ix) *Changes in Occupation,* 1871 to 1921. The following table shows the changes which have taken place in the occupations of the people in the 50 years from 1871 to 1921, and illustrates the relative decline in the number of breadwinners engaged in the primary industries and the corresponding expansion of the other industrial groups. The arrest of progress from the financial crisis of the nineties is also brought into striking relief. From the Census of 1871 the proportion engaged in the primary group fell, and that in the industrial group rose until at the Census of 1891 the two groups were practically equal. The Census of 1901, i.e., after the financial collapse, showed a reversion to the primary from the secondary industries. A feature of the movement of that time was the transfer of workers from the industries of the eastern States to the goldfields of Western Australia. The same cause was no doubt responsible for the increased proportion represented in 1901 by the domestic class, which, with this exception, has declined since 1881. The curve of the development of the industrial group during the twenty years 1901–1921 is somewhat similar to that during the period 1871 to 1891, but, whereas in 1891 the proportions represented by the industrial and primary groups were equal, in 1921 the industrial group represented 31.2 per cent. of all breadwinners, and the primary group 25.8 per cent. only.

Increased proportions in the professional, commercial, and transport classes evidence the higher standard of life and the increasing complexity of the social structure.

POPULATION.—OCCUPATIONS, AUSTRALIA, CENSUSES 1871 TO 1921.

Occupations.	1871.	1881.	1891.	1901.	1911.	1921.
I. Professional ..	35,534	50,495	84,887	112,356	146,608	201,887
II. Domestic ..	79,684	111,164	158,651	202,216	202,925	210,362
III. Commercial ..	56,131	83,918	167,653	224,028	291,366	355,767
IV. Transport and Communication	26,173	41,445	92,632	122,702	158,854	208,222
V. Industrial ..	182,615	269,140	419,445	429,012	569,132	725,816
VI. Primary Producers	303,044	349,344	419,499	535,766	608,843	599,750
VII. Independent ..	5,953	8,778	23,126	22,430	26,402	20,667
Total Breadwinners ..	689,134	914,284	1,365,893	1,648,510	2,004,130	2,322,471
VIII. Dependents ..	979,452	1,338,333	1,808,499	2,125,291	2,450,875	3,113,263
Total ..	1,668,586	2,252,617	3,174,392	3,773,801	4,455,005	5,435,734

NOTE.—In this table those cases for which no occupation was stated have been distributed proportionately over the various classes of breadwinners.

OCCUPATIONS.—PERCENTAGES OF EACH CLASS ON TOTAL BREADWINNERS. AUSTRALIA, CENSUSES 1871 TO 1921.

Occupations.	1871.	1881.	1891.	1901.	1911.	1921.
	%	%	%	%	%	%
Professional	5.1	5.5	6.2	6.8	7.3	8.7
Domestic	11.6	12.2	11.6	12.2	10.1	9.1
Commercial	8.1	9.2	12.3	13.6	14.5	15.3
Transport and Communication ..	3.8	4.5	6.8	7.4	8.0	9.0
Industrial	26.5	29.4	30.7	26.1	28.4	31.2
Primary	44.0	38.2	30.7	32.5	30.4	25.8
Independent	0.9	1.0	1.7	1.4	1.3	0.9
Total Breadwinners ..	100.0	100.0	100.0	100.0	100.0	100.0

8. Grade of Employment—(i) *General.* The term "grade of employment" indicates the capacity in which persons are employed in the various branches of industry. The grades recorded are five in number, viz.:—(*a*) Employer, (*b*) Working on own account, (*c*) Assisting but not receiving wages or salary, (*d*) Receiving wages or salary, and (*e*) Unemployed. In addition to these categories provision is made for (*f*) Grade not applicable—which consists mainly of dependents and persons of independent means not engaged in gainful occupations, and (*g*) Grade not stated.

(ii) *Employers and Workers on Own Account.* For all States the figures show a decline in the number of employers, and an increase in the number of those working on their own account. For Australia as a whole the number of employers fell from

222,866 in 1911 to 141,570 in 1921, or by 36.5 per cent., while the number working on their own account increased by 87.5 per cent. from 185,161 in 1911, to 347,250 in 1921. From these results it would appear that many of the small employers of 1911 had dispensed with paid assistance in 1921. It is probable, also, that the establishment of returned soldiers in small businesses and other ventures increased the number of workers on their own account.

(iii) *Assisting, but not Receiving Wages.* The number of those assisting, but not receiving wages or salary—mainly sons, daughters, or other relatives of the principal—fell by 55.4 per cent., from 78,427 in 1911 to 34,983 in 1921.

(iv) *Wage Earners.* In considering the proportion of the wage and salary-earning division of the community, account must be taken of the persons returned as unemployed at the date of the Census, since, ordinarily, these persons are wage or salary earners. Combining the two grades, therefore, it appears that of the total population of Australia on the 4th April, 1921, the wage and salary earners represented 31 per cent. Excluding those persons to whom grade of employment is not applicable, about 74 per cent. of male breadwinners and 86 per cent. of the female breadwinners were wage or salary earners.

(v) *Unemployed.* The number returned as unemployed in 1921 was nearly three times as great as in 1911, this result being confirmed by figures collected in connexion with the Labour and Industrial Branch of the Bureau of Census and Statistics.

POPULATION.—GRADE OF EMPLOYMENT, AUSTRALIA, CENSUS OF 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

Grade.	States.						Territories.		Australia
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern.	Fed. Cap.	
Employer ..	48,674	45,289	19,770	13,590	9,317	4,792	101	37	141,570
Working on own account ..	123,668	98,293	54,302	31,893	23,445	14,902	607	140	347,250
Assisting but not receiving wages or salary	11,046	11,803	5,748	2,931	1,498	1,942	10	5	34,983
Receiving wages or salary	593,283	437,679	197,165	137,478	96,879	54,247	1,473	832	1,519,036
Unemployed ..	62,502	40,443	33,665	10,692	9,157	4,116	356	25	160,956
Grade not applicable	1,261,198	897,773	445,322	298,576	192,436	133,781	1,320	1,533	3,231,939
Total ..	2,100,371	1,531,280	755,972	495,160	332,732	213,780	3,867	2,572	5,435,734

9. **Unemployment.**—(i) *Causes.* At the Census of the 4th April, 1921, there were in Australia 1,679,992 wage or salary earners, of whom 160,956 were unemployed. The following table shows that approximately 50 per cent. of the unemployment was due to scarcity of work, 29 per cent. to illness or accident, 3 per cent. to industrial disputes, 1.5 per cent. to old age, and 17 per cent. to other causes.

POPULATION.—CAUSES OF UNEMPLOYMENT, AUSTRALIA, CENSUS OF 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

Particulars.	Scarcity of Employment.	Illness.	Accident.	Industrial Dispute.	Old Age.	Other Cause.	Total.
Males	72,882	31,648	4,833	4,511	2,199	23,365	139,438
Females	6,456	10,170	261	307	77	4,247	21,518
Persons	79,338	41,818	5,094	4,818	2,276	27,612	160,956

(ii) *Duration.* At the Census of 1921 persons who were unemployed on Saturday, 2nd April, 1921, were asked to state the number of working days during which they had been out of work. The results of the enquiry show that approximately 46 per cent. were unemployed under five weeks, 17.2 per cent. from five to ten weeks, 10.6 per cent. from ten to fifteen weeks, and 26.2 per cent. above fifteen weeks :—

POPULATION.—DURATION OF UNEMPLOYMENT, AUSTRALIA, CENSUS OF 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS.)

Duration of Unemployment in Working Days.	4th April, 1921.			Duration of Unemployment in Working Days	4th April, 1921		
	Males.	Females.	Persons.		Males.	Females.	Persons.
Under 10 ..	26,215	4,101	30,316	70–79 ..	4,991	807	5,798
10–19 ..	22,482	3,440	25,922	80–89 ..	2,862	409	3,271
20–29 ..	15,221	2,381	17,602	90 and over	36,950	5,426	42,376
30–39 ..	12,113	1,906	14,019				
40–49 ..	7,273	1,199	8,472				
50–59 ..	4,479	748	5,227				
60–69 ..	6,852	1,101	7,953	Total ..	139,438	21,518	160,956

(iii) *Unemployment in States.* Particulars regarding unemployment in the separate States at the time of the Census may be found in Part XVII. (Occupations) of the tables relating to the Census of 1921.

§ 9. Dwellings.

[NOTE.—Information concerning dwellings will be found in detail in Census Parts Nos. XVIII.—XXV.]

1. **General.**—The following table represents a summary of the information relating to dwellings which was obtained at the Census of 1921. Including those in course of construction there were in Australia on the 4th April, 1921, 1,210,786 dwellings—including hotels, boarding-houses, hospitals, gaols and any structure for the purpose of shelter as a dwelling, but excluding wagons used as camps, and dwellings occupied solely by full-blood aboriginals. The number of dwellings per square mile varies from 1 to every 433 square miles in the Northern Territory to 3.96 (approximately one dwelling to every quarter of a square mile) in Victoria, the average throughout Australia being 0.41. Of the total dwellings referred to above, 51,163 were stated to be unoccupied. This description does not, however, mean all dwellings so returned were "to let" but, merely, that they had no inmates on the night of the census. The average number of rooms per occupied dwelling ranged from 5.33 in Victoria to 4.59 in Western Australia, the average for Australia being 4.96 as compared with 5.18 in 1911. The number of persons per occupied dwelling varied from 4.85 in New South Wales, to 4.52 in Western Australia, the average for Australia being 4.71, as compared with 4.82 in 1911. For Australia as a whole, there were 0.95 persons per room in 1921, as against 0.93 persons in 1911.

2. **Occupied Private Dwellings.**—A better index to the housing conditions of the people is obtained by excluding all other than occupied *private* dwellings. The following table shows that of the 1,153,285 occupied dwellings in Australia, 1,107,010 were private dwellings. These contained an average of 4.94 rooms in 1921, as compared with 4.93 in

1911, and had an average of 4.40 inmates, as against 4.53 in 1911. The number of inmates per room in occupied private dwellings in Australia declined from 0.92 in 1911 to 0.89 in 1921.

3. **Private Dwellings occupied by Tenants.**—For Australia as a whole the proportion of private dwellings which were occupied by tenants dropped from 47.78 per cent. in 1911 to 43.68 in 1921. The falling off was due mainly to the increase in the number of dwellings occupied by rent purchasers resultant on the policies of the State Governments of advancing money for the building of homes, and on the activities of the War Service Homes Commissioners.

DWELLINGS.—AUSTRALIA, CENSUS, 4th APRIL, 1921.

(EXCLUSIVE OF DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

Particulars of Dwellings.	States.						Territories.		Australia
	New South Wales.	Victoria.	Q'land.	South Aust.	West. Aust.	Tasmania.	Northern.	Fed. Cap.	
All Dwellings									
Occupied(*a*) ..	432,976	331,290	160,139	107,914	73,548	45,818	1,074	526	1,153,285
Unoccupied ..	18,619	14,994	6,747	4,431	3,274	2,934	135	29	51,163
Being Built ..	2,724	2,009	347	674	289	295	..	..	6,338
Total Dwellings ..	454,319	348,293	167,233	113,019	77,111	49,047	1,209	555	1,210,786
Number of Dwellings per square mile ..	1.47	3.96	0.25	0.30	0.08	1.87	.002	0.59	0.41
Rooms per Occupied Dwelling ..	5.23	5.33	5.31	5.09	4.59	4.70	2.80	5.29	4.96
Population per Occupied Dwelling..	4.85	4.62	4.72	4.59	4.52	4.67	3.60	4.89	4.71
Occupied *Private* Dwellings ..	414,468	318,936	153,313	104,295	70,185	44,432	1,005	376	1,107,010
Rooms per Dwelling	4.97	5.11	4.94	4.90	4.22	4.80	2.70	4.85	4.94
Inmates per Dwelling	4.52	4.34	4.40	4.34	4.11	4.44	2.83	4.39	4.40
Inmates per Room	0.91	0.85	0.89	0.89	0.97	0.93	1.05	0.91	0.89
Percentage occupied by Tenants ..	49.72	42.46	33.59	40.67	36.95	47.30	25.31	65.18	43.68
Weekly Rental Value (*b*)	18s. 2d.	16s. 11d.	13s. 6d.	14s. 7d.	13s. 11d.	11s. 10d.	13s. 5d.	9s. 0d.	16s. 6d.

(*a*) Excluding Wagons and Camps. (*b*) Average weekly rental value of private dwellings *occupied by tenants.*

4. **Private Dwellings in Urban and Rural Divisions.**—(i) *General.* The following table, which relates to *occupied private dwellings* in the Urban and Rural Divisions of Australia, shows that, while the average number of rooms and the average number of inmates per occupied private dwelling are greater in the Metropolitan Area than in the Urban Provincial or Rural Districts, the average number of inmates per room is least in the Metropolitan Districts.

(ii) *Tenants.* The proportion of occupied private dwellings occupied by tenants is greatest in the Metropolitan Areas, where it represents 53.17 per cent. of all dwellings for which the mode of occupancy was stated, as against 46.05 per cent. in the Urban Provincial Districts, and 31.02 per cent. in the Rural Districts. In urban districts, however, the dwelling is as a rule valued as a purely residential entity, whereas in rural districts the productive property of the land—to which the dwelling is an appurtenance—is most often the incentive to ownership.

(iii) *Rental Value.* Considerable divergence was shown between the Metropolitan and other divisions of the country in the weekly rental value of private dwellings, which vary from an average of 9s. 11d. in the Rural Districts to 20s. 8d. in the Metropolitan Areas.

OCCUPIED PRIVATE DWELLINGS.—URBAN AND RURAL, AUSTRALIA, CENSUS, 4th APRIL, 1921.

Particulars.	Urban.		Rural.	Total.
	Metropolitan.	Provincial.		
Occupied Private Dwellings	467,913	207,807	431,290	1,107,010
Rooms per Dwelling	5.15	5.07	4.66	4.94
Inmates per Dwelling	4.42	4.40	4.39	4.40
Inmates per Room	0.86	0.87	0.95	0.89
Percentage occupied by Tenants ..	53.17	46.05	31.02	43.68
Weekly Rental Value(*a*)	20s. 8d.	14s. 0d.	9s. 11d.	16s. 6d.

(*a*) Average weekly rental value of private dwellings occupied by tenants.

5. Private Dwellings in Metropolitan Areas.—(i) *General.* The number of rooms per dwelling in these areas varied from a minimum of 4.67 in Perth to a maximum of 5.47 in Brisbane—a difference of 17 per cent., but the number of inmates per dwelling varied from 4.31 in Adelaide to 4.52 in Sydney—a difference of 5 per cent. only. The average number of inmates per room was highest in Perth, with 95 persons to every 100 rooms, and lowest in Brisbane, where there were 81 persons to every 100 rooms.

(ii) *Tenants.* The proportion of private dwellings in Metropolitan Areas occupied by tenants ranged from 39.18 per cent. in Brisbane to 59.22 per cent. in Sydney, the average for the six capitals being 53.17 per cent., as against 63.48 per cent. in 1911. As already mentioned, the decline during the decade 1911–1921 in the proportion of tenants was due largely to the action of the State Governments and of the War Service Homes Commissioners in facilitating the acquisition of houses under the system of purchase by instalment.

(iii) *Rental Value.* The weekly rent of private dwellings ranged from 17s. 1d. per week in Hobart to 23s. per week in Sydney.

OCCUPIED PRIVATE DWELLINGS IN METROPOLITAN AREAS.—CENSUS, 4th APRIL, 1921.

Particulars of Dwellings.	Sydney and Suburbs.	Melbourne and Suburbs.	Brisbane and Suburbs.	Adelaide and Suburbs.	Perth and Suburbs.	Hobart and Suburbs.	Total.
Occupied Private Dwellings ..	173,322	158,001	42,378	53,741	29,741	10,730	467,913
Rooms per Dwelling	5.14	5.19	5.47	5.06	4.67	5.10	5.15
Inmates per Dwelling ..	4.52	4.34	4.44	4.31	4.43	4.35	4.42
Inmates per Room	0.88	0.84	0.81	0.85	0.95	0.85	0.86
Percentage occupied by Tenants	59.22	54.14	39.18	46.64	43.57	55.02	53.17
Weekly Rental Value(*a*) ..	23s. 0d.	20s. 0d.	17s. 2d.	17s. 9d.	17s. 8d.	17s. 1d.	20s. 8d.
Weekly Rental Value per Room	4s. 6d.	3s. 10d.	3s. 2d.	3s. 6d.	3s. 10d.	3s. 5d.	4s. 0d.

(*a*) Average weekly rental value of private dwellings occupied by tenants.

§ 10. Immigration.

(A) The Encouragement of Immigration into Australia.

1. **General.**—Various measures have from time to time been adopted by the Commonwealth and State Governments, as well as by private societies and individuals, to promote the immigration of suitable settlers into Australia. The activities of the Commonwealth Government (which is vested with constitutional powers in regard to immigration under section 51, xxvii., of the Constitution Act 1900) with respect to the encouragement of immigration, were formerly confined to advertising the resources and attractions of Australia by means of exhibitions, and in handbooks, newspapers, and periodicals. During the war, immigration operations were almost entirely suspended.

2. **Joint Commonwealth and States' Immigration Scheme.**—In 1920 an arrangement was arrived at between the Commonwealth and State Governments under which the Commonwealth is responsible for the recruiting of immigrants abroad and for their transport to Australia, whilst the State Governments advise the Commonwealth as to the numbers and classes of immigrants which they are prepared to receive. Briefly stated, the Commonwealth selects the immigrant according to the requirements of the State concerned and brings him to Australia, and on his arrival the State Government assumes the responsibility for placing him in employment or upon the land. Incidentally, the Commonwealth undertakes all publicity and propaganda in connexion with the encouragement of immigration.

3. **Assisted Passages.**—During the period 1st May, 1925, to 31st March, 1928, the British and Commonwealth Governments jointly donated the following contributions towards the passages of approved settlers for Australia from the United Kingdom :—Children under 12 years, £16 10s. (representing the whole of the half fare) ; juveniles 12 and under 17 years, £27 10s. ; juveniles 17 years and under 19 years, £22 ; married couples, including widowers or widows, and wives nominated by husbands, with at least one child under 19 years, £22 per parent (children at rate according to age); domestic servants, £33 ; others including children 19 years of age and over, £16 10s. Allowing for this financial assistance, children under 12 years will be carried free ; juveniles 12 years of age and under 17 years, who are ordinarily charged for by the shipping companies as adult passengers, will merely require to pay £5 10s. each ; juveniles 17 years and under 19 years, £11 each ; married couples, including widowers or widows, and wives nominated by husbands, with at least one child under 19 years, £11 per parent (children at rate according to age) ; domestic servants free ; others, including children 19 years and over, £16 10s. each. Persons who have previously resided in the Commonwealth are not eligible for assistance. In addition to these contributions, loans of the balance of the passage money are in special cases granted by the Governments concerned. Persons entitled to assisted passages are divided into two classes—" Selected " and " Nominated." " Selected " immigrants are those such as farm workers and domestics who are originally recruited abroad by the Commonwealth Government. " Nominated " immigrants are those nominated by persons resident in Australia, and the nominators, who must submit their applications through the officers in charge of the State Immigration Offices in the various capital cities, are held responsible for their nominees upon arrival, so that they shall not become a burden upon the State.

Intending settlers or immigrants may, on application, obtain full information from the Director of Migration and Settlement, Australia House, Strand, London, W.C.2. ; or from the Secretary, Development and Migration Commission, "Kurrajong House" 175–177 Collins-street, Melbourne.

4. **Migration Agreement between British and Commonwealth Governments.**—On the 8th April, 1925, the British and Commonwealth Governments entered into an agreement under which it is proposed to furnish to the Governments of the various States, loan moneys at a very low rate of interest, to enable suitable areas of land to be made available for settlement, or to enable such public works to be carried out as will

tend to develop and expand settlement areas or will enable areas already settled to carry a greater population. The maximum amount of loan moneys provided for in the agreement is £34,000,000. It is provided that for every principal sum of £75 issued to a State Government under the agreement, one assisted migrant shall sail direct from the United Kingdom and be received into and satisfactorily settled in the State concerned. If full advantage is taken of the offer of loan moneys contained in the agreement, 450,000 new settlers will be absorbed during a period of ten years.

5. Results of Assisted Immigration.—In the earlier days of settlement in Australia, State-assisted immigration played an important part. Such assistance ceased for the time being in Victoria in 1873, in South Australia in 1886, and in Tasmania in 1891. In New South Wales, general State-aided immigration was discontinued in the year 1887, but those who arrived under that system and were still residing in New South Wales, might, under special regulations, send for their wives and families. A certain amount of passage money, graduated according to the age of the immigrant, had to be paid in each case. Under the provisions of these regulations, immigrants to the number of 1,994 received State assistance during the years 1888 to 1899 inclusive. From 1900 to 1905 no assistance of any kind was given, but from 1906 onwards assistance has again been granted. In Queensland and Western Australia, such assistance, although varying considerably in volume from year to year, has been accorded for many years past. Assistance to immigrants, which in the case of Victoria had practically ceased in 1873, has recently been again afforded. In South Australia the principle of State assistance was again introduced in 1911, and in Tasmania in 1912.

The number of assisted immigrants for the years 1914 to 1927 and the total from the earliest years up to the end of 1927 are given in the following table :—

ASSISTED IMMIGRATION.—1914 TO 1927, AND UP TO THE END OF 1927.

Persons.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	F.C. Terr.	Total.
No. Assisted during 1914	6,655	7,496	4,096	644	1,729	185	..	20,805
,, ,, ,, 1915	1,695	1,724	1,599	79	635	64	..	5,796
,, ,, ,, 1916	649	327	300	..	103	18	..	1,397
,, ,, ,, 1917	239	146	91	..	26	2	..	504
,, ,, ,, 1918	199	101	100	..	26	..	..	426
,, ,, ,, 1919	67	139	39	..	..	..	..	245
,, ,, ,, 1920	3,211	2,763	1,272	..	1,499	314	..	9,059
,, ,, ,, 1921	4,980	3,987	1,147	572	3,381	615	..	14,682
,, ,, ,, 1922	7,087	9,145	1,711	1,531	4,373	411	..	24,258
,, ,, ,, 1923	5,005	9,504	2,377	1,711	7,654	394	..	26,645
,, ,, ,, 1924	6,211	8,721	1,788	1,375	6,715	226	..	25,036
,, ,, ,, 1925	8,788	8,589	2,318	1,292	3,701	139	..	24,827
,, ,, ,, 1926	12,830	8,586	3,669	1,993	4,030	152	..	31,260
,, ,, ,, 1927	10,260	8,847	3,504	2,420	4,879	189	24	30,123
Total from earliest years to end of 1927 ..	330,373	247,036	231,972	113,601	78,053	24,623	24	1,025,682

(B) The Regulation of Immigration into Australia.

1. Pre-Federal Restrictions.—(i) *Alien Races.* For many years prior to federation the States had imposed certain restrictions upon the admission of persons desirous of becoming permanent residents. The influx of Chinese, for example, was limited by stringent statutes, and later, general Acts were passed in some of the States which restricted the immigration of other—principally Asiatic—races.

(ii) *Undesirable Immigrants.* Further restrictions were placed upon the admission of persons who were undesirable as inhabitants, either for medical or moral reasons, or who were likely to become an economic burden upon the community.

2. Powers and Legislation of the Commonwealth.—(i) *Constitutional.* Under Part V., Sec. 51, xxvii. and xxviii. of the Commonwealth Constitution Act, the Parliament of the Commonwealth is empowered to make laws with respect to immigration and emigration and the influx of criminals. (See page 24 hereinbefore.)

(ii) *Legislation.* The powers above specified have been exercised by the Commonwealth Government, and the laws passed in pursuance thereof supersede the previously existing State laws. The present Commonwealth Acts dealing with Immigration are the Immigration Act 1901–1925 and the Contract Immigrants Act 1905. A summary of the provisions of these Acts (excepting the provisions of the Amending Immigration Acts of 1920, 1924 and 1925, which are given below), containing particulars regarding the admission of immigrants, prohibited immigrants, the liabilities of shipmasters and others, and kindred matters will be found in preceding Year Books (see Year Book, No. 12, pp. 1166 to 1168).

3. Amending Immigration Act 1920.—The principal provisions of this Act, which came into operation as from the 2nd December, 1920, are those prohibiting the entry of (*a*) any person who advocates the overthrow by force or violence of the established Government of the Commonwealth or of any State or of any other civilized country, or of all forms of law, etc. ; (*b*) for a period of five years, and thereafter until the Governor-General by proclamation otherwise determines, any person of German, Austro-German, Bulgarian, or Hungarian parentage and nationality, or Turk of Ottoman race ; (*c*) any person over 16 years of age who, on demand by an officer, fails to prove that he is the holder of a valid passport ; and (*d*) any person who has been deported under any Act.

Section 9 of the War Precautions Act Repeal Act also provides for prohibiting the entry of any British subject who upon being required to make and subscribe an oath or affirmation of loyalty fails to do so.

4. Amending Immigration Act 1924.—The provisions of this Act were mainly intended to improve the machinery of the existing law. Section 3, paragraph (*f*), of the principal Act was amended to include amongst the classes of prohibited immigrants any persons who in the opinion of an officer were considered likely to become a charge upon the public through having insufficient means of support or from any other cause. It is now required that every alien immigrant must be in possession of at least £40 landing money, unless his maintenance has been guaranteed by some one residing in Australia.

5. Amending Immigration Act 1925.—This measure contains several important amendments, the principal of which are those providing power—(i) To prohibit the entry of any person declared by the Minister to be, in his opinion—from information received from the Government of the United Kingdom or of any other part of the British Dominions or from any foreign Government, through official or diplomatic channels—undesirable as an inhabitant of, or visitor to, the Commonwealth. (ii) To prohibit by proclamation, either wholly or in excess of specified numerical limits, and either permanently or for a specified period, the immigration into the Commonwealth, or the landing at any specified port or place in the Commonwealth, of aliens of any specified nationality, race, class or occupation, in any case where it is deemed desirable so to do—(*a*) on account of the economic, industrial, or other conditions existing in the Commonwealth ; (*b*) because the persons specified in the proclamation are deemed to be unsuitable for admission into the Commonwealth ; or (*c*) because they are deemed unlikely to become readily assimilated or to assume the duties and responsibilities of Australian citizenship within a reasonable time after their entry. (iii) To deport persons, other than those born in Australia, who have been concerned in Australia in acts directed towards hindering or obstructing, to the prejudice of the public, the transport or the conveyance of passengers, or the provision of necessary services, and whose presence in Australia is considered likely to be injurious to the peace, order, and good government of the Commonwealth. Before action can be taken under the latter provision to deport any person from the Commonwealth, he must be required to appear before a specially appointed Board, to afford him an opportunity to show cause why he should not be deported. The Board will consist of three members nominated by the Minister, and the Chairman must be a person who holds or has held the office of Judge, or of Police, Stipendiary, or Special Magistrate.

6. Compilation of Statistics.—The statistics relative to immigration, which are presented in this Chapter, have been compiled by the Department of Home and Territories in accordance with the provisions of the Immigration Act 1901–25. The number of persons admitted without test includes Australian citizens who have been abroad, and other persons landing in Australia irrespective of the length of time which they propose to stay. Certain persons who are permitted to land (under security for their subsequent departure) pending transhipment to another country are not included. The majority of the persons of Asiatic or other non-European nationality shown in the table are former residents of Australia who have returned from visits abroad, or are persons who have been admitted temporarily under exemption certificates, for business, educational, or other purposes. The Immigration Act 1901–25 does not require any statistical record of the departures from Australia.

It may be mentioned, however, in this connexion, that the Bureau of Census and Statistics, for the purpose of estimating the population of Australia, compiles—from data collected by the Department of Trade and Customs—statistics of both arrivals into and departures from Australia. For this compilation, all persons leaving an oversea ship, and all persons joining an oversea ship, in any Australian port, are counted. Consequently the number of arrivals as recorded respectively under the Immigration Act and by this Bureau are not in complete agreement. During the last five years the number of persons who came to Australia but were not permitted to land was 49 in 1923 ; 50 in 1924 ; 35 in 1925 ; 58 in 1926 ; and 88 in 1927.

7. Persons Admitted Without Dictation Test.—The following table shows the number and nationality of persons admitted during the years 1923 to 1927 without passing the dictation test :—

PERSONS ADMITTED WITHOUT DICTATION TEST.—NATIONALITIES, AUSTRALIA, 1923 TO 1927.

Nationality or Race.	1923.	1924.	1925.	1926.	1927.
EUROPEANS—					
Austrian	(*a*)2	9	28	48	91
Belgian	84	69	112	106	95
British	85,440	88,335	82,662	90,562	93,382
Danish	172	189	150	184	206
Dutch	219	248	183	206	199
Finnish	154	374	149	126	173
French	378	660	577	703	751
German	(*a*)130	195	288	547	819
Greek	922	2.028	645	683	1,593
Italian	1,739	4,540	6,102	3,952	7,884
Jugo-Slavian	240	1,933	950	1,427	1,432
Maltese (British) ..	323	418	401	384	513
Norwegian and Swedish	491	383	172	258	241
Polish	58	111	178	501	560
Portuguese	4	..	..	..	..
Rumanian	14	23	21	34	39
Russian	256	312	515	477	371
Spanish	85	108	103	92	77
Swiss	160	277	258	246	364
Turkish	2	..	..	..	..
Other European ..	193	428	298	401	1,384
AMERICANS—					
North Americans ..	1,470	1,400	1,479	1,626	1,884
South Americans ..	13	27	..	..	..
American Indians ..	..	..	..	..	..
Negroes	13	11	9	20	10
West Indians	6	2	3	2	4

(*a*) Landed on exemption certificates or under special authority.

PERSONS ADMITTED WITHOUT DICTATION TEST.—NATIONALITIES, AUSTRALIA, 1923 TO 1927—*continued.*

Nationality.	1923.	1924.	1925.	1926.	1927.
ASIATICS—					
Arabs	3	16	7	10	3
Chinese	1,974	1,917	1,256	1,780	1,767
Filipinos	25	15	22	15	7
Japanese	222	240	440	328	251
Javanese	4	1	12	5	7
Malays	29	23	69	72	16
Natives of India and Ceylon	141	174	186	188	190
Palestinians	(*a*)	(*a*)	87	83	259
Syrians	147	288	172	224	222
Timorese	243	316	287	212	..
OTHER RACES—					
Maoris	..	..	..	..	..
Mauritians	..	..	..	..	..
Pacific Islanders ..	43	50	36	69	55
Papuans	282	365	383	312	354
Unspecified	44	86	39	35	111
Total	95,725	105,571	98,279	105,918	115,314

(*a*) Not previously recorded.

8. **Departures of Persons of Non-European Races.**—The following table shows the number of persons of non-European races who left Australia during the years 1923 to 1927 :—

DEPARTURES OF PERSONS OF NON-EUROPEAN RACES—AUSTRALIA, 1923 TO 1927.

Nationality.	1923.	1924.	1925.	1926.	1927.
American Negroes ..	4	7	11	9	21
West Indians	7	1	..	3	5
Afghans	1	2	6	..	1
Arabs	3	4	9	8	4
Chinese	2,310	1,898	1,732	2,145	2,360
Filipinos	23	14	15	33	14
Japanese	436	366	336	293	434
Javanese	2	3	7	7	4
Malays	92	43	32	31	63
Natives of India and Ceylon	167	156	246	212	234
Pacific Islanders	38	57	35	43	66
Papuans	359	282	382	323	305
Timorese	(*a*)	(*a*)	(*a*)	275	255
Others	214	488	31	38	65
Total	3,656	3,321	2,842	3,420	3,831

(*a*) Not previously recorded.

(C) Passports.

Provision is made in the Immigration Act 1920 for the production of passports by all persons over 16 years of age who desire to enter Australia. Similarly, the Passports Act 1920 provides that no person over the age of 16 years shall leave Australia unless—

(*a*) he is the holder of a passport or other document authorizing his departure ; and

(*b*) his passport has been viséed or indorsed in the prescribed manner for that journey, and the visé or indorsement has not been cancelled.

Among the exceptions to this requirement are natural-born British subjects leaving for New Zealand, Papua, or Norfolk Island; members of the crew of any vessel who sign on in Australia for an oversea voyage and who satisfy an authorized officer that they are by occupation seafaring men; aboriginal natives of Asia, or of any island in the East Indies, or in the Indian or Pacific Oceans. The charge for a Commonwealth passport is 10s., and for a visé 2s.

With regard to (*b*), the Commonwealth Government has agreed to the inclusion of Australia in reciprocal arrangements for the abolition of visé requirements made by the British Government with the respective Governments of the following countries, viz.:—France, Switzerland, Liechtenstein, Italy, Belgium, Denmark, Sweden, and Norway.

§ 11. Naturalization.

1. **Commonwealth Legislation.**—A brief summary of the Commonwealth legislation regarding naturalization is given in Year Book No. 15 (p. 1090).

The "Nationality Act 1920" was amended by the "Nationality Act 1922," which extends the operation of the principal Act to the Territories of Papua and Norfolk Island, and to any other territories under the authority of the Commonwealth to which the Governor-General by proclamation declares it to extend. A further amendment made by the Nationality Act 1925, the object of which was to bring the Nationality Act into line with the British law and to meet the wishes of British communities in foreign countries, restores the privilege of British nationality to children of the second generation, and under certain conditions to children of later generations. A penal clause was also inserted dealing with trafficking in naturalization certificates.

The grant of a certificate of naturalization entitles the recipient to all the rights and privileges, and renders him subject to all the obligations of a natural-born British subject, with the exception that where, by any Commonwealth or State Constitution or Act, a distinction is made between natural-born British subjects and naturalized persons, such distinction shall hold good in the case of all persons naturalized under the Commonwealth Act.

The "Nationality Act 1920" provides that applications for certificates of naturalization must be made to the Governor-General, the qualifications required in an applicant being:—(i) Residence in Australia or a Territory continuously for not less than one year immediately preceding his application for naturalization, and previous residence, either in Australia or in some other part of His Majesty's dominions, for a period of four years within the last eight years before the application; (ii) Good character and an adequate knowledge of the English language; and (iii) Intention to settle in the British Empire.

The applicant is required to furnish the following particulars in support of his application:—His own statutory declaration stating—(*a*) Name; (*b*) Age; (*c*) Birthplace; (*d*) Occupation; (*e*) Residence; (*f*) Length of residence in the British Empire; (*g*) Intention to settle in the British Empire; and (*h*) Such other particulars as are prescribed. He must also furnish—(*a*) Newspapers containing copies of an advertisement, as prescribed, of his intention to seek naturalization; (*b*) Certificates of character from three natural-born British subjects, two of whom must be householders, and the third a Justice of the Peace, Postmaster, State School Teacher, or Police Officer; and (*c*) Satisfactory evidence that he has an adequate knowledge of the English language.

The Governor-General in Council may, in his absolute discretion, and with or without assigning any reason, grant or withhold a certificate of naturalization as he thinks most conducive to the public good; but the issue of a certificate of naturalization will not be effected until the applicant furnishes a certificate signed by a Justice of the High Court of Australia, a State Judge, or a Magistrate, certifying that he has renounced allegiance to the country of which he was a subject at the time of his application for naturalization, and that he has taken an oath or affirmation of allegiance to the Crown in accordance with the Constitution. The grant of a certificate is made free of charge.

In addition to naturalization by grant of certificate, the act makes provision for—(*a*) Naturalization by marriage; and (*b*) Naturalization by inclusion in certificate granted to parent.

The former relates to the case of a woman who is not herself a British subject, but is married to a British subject; the latter to that of a person who is not a natural-born British subject, but who being under 21 years of age has, at the request of the parent, been included in the certificate granted to him by the Commonwealth. In each instance the person concerned is deemed to be naturalized under the Commonwealth Act.

The Governor-General may revoke a certificate of naturalization on any one of a number of grounds set out in Section 12 of the Nationality Act 1920–22, and the grantee thereupon ceases to be a British subject and is regarded as a subject of the State to which he belonged at the date of issue of the certificate of naturalization.

Where a wife and any minor children have acquired British nationality under the certificate issued to the husband and father, and such certificate is subsequently revoked, the wife and children remain British subjects unless the Governor-General otherwise declares, or unless they themselves elect to make a declaration of alienage.

In accordance with the Act, a list of persons naturalized, with their addresses, is published in the *Commonwealth Gazette* from time to time.

The administration of the Act is carried out by the Home and Territories Department and the Governor-General is authorized to make such regulations as are necessary or convenient for giving effect to the Act.

2. Certificates Granted.—(i) *Australia.* Particulars regarding the previous nationalities of the recipients of certificates of naturalization issued under the Act during each of the five years 1923 to 1927, and the countries from which such recipients had come, are given in the following table:—

NATURALIZATION.—COMMONWEALTH CERTIFICATES GRANTED, 1923 TO 1927.

Previous Nationalities of Recipients.	No. of Certificates Granted.					Countries from which Recipients of Commonwealth Certificates had come.	No. of Certificates Granted.				
	1923.	1924.	1925.	1926.	1927.		1923.	1924.	1925.	1926.	1927.
Italian ..	138	177	154	286	395	Great Britain ..	128	122	108	129	60
Swedish ..	27	37	29	56	38	Italy ..	136	163	142	274	380
Danish ..	42	44	36	48	38	Germany ..	155	151	104	103	77
Russian ..	82	60	68	62	57	America (North)	55	44	45	54	47
German ..	196	176	134	126	95	Sweden ..	7	15	17	28	28
Norwegian ..	31	30	17	29	33	Denmark ..	9	21	16	36	32
Greek ..	141	173	172	215	165	Norway ..	16	12	13	19	26
American (North)	17	22	19	26	18	Greece ..	85	131	131	155	143
Dutch ..	15	22	16	20	20	France ..	16	25	11	21	16
Swiss ..	13	15	10	19	28	Egypt ..	47	31	26	41	11
French ..	19	33	28	27	22	America (South)	16	14	8	13	4
Spanish ..	26	22	17	20	15	Holland ..	6	9	8	8	14
Belgian ..	3	3	4	10	10	Russia ..	48	35	30	28	34
Rumanian ..	4	5	3	4	2	South Africa ..	9	13	15	15	13
Portuguese ..	2	1	..	1	2	Belgium ..	17	2	6	9	8
American (South)	1	..	1	2	1	New Zealand ..	17	17	12	9	24
Austrian ..	14	8	8	9	6	Switzerland ..	7	11	6	10	25
Mexican ..	..	..	..	..	..	Spain ..	19	12	16	13	12
Chinese ..	..	1	..	..	..	New Caledonia ..	..	..	5	8	3
Serbian ..	2	3	1	1	..	Argentine ..	..	..	2	4	3
Syrian ..	33	31	30	28	18	Canada ..	6	5	6	2	4
Polish ..	19	24	22	38	26	Finland ..	2	10	15	14	18
Finnish ..	18	16	27	26	24	Other Countries	124	121	126	130	105
Others ..	77	66	72	70	74						
Total ..	920	964	868	1,123	1,087	Total ..	920	964	868	1,123	1,087

(ii) *States.* The following table furnishes particulars concerning the States in which the recipients of Commonwealth certificates of naturalization during the years 1923 to 1927 were resident :—

NATURALIZATION.—COMMONWEALTH CERTIFICATES GRANTED IN EACH STATE, ETC., 1923 TO 1927.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern Territory.	Australia.
1923 ..	272	145	290	63	145	3	2	920
1924 ..	280	163	254	75	176	10	6	964
1925 ..	294	156	180	60	172	3	3	868
1926 ..	385	172	258	67	224	14	3	1,123
1927 ..	364	189	258	61	200	10	5	1,087

3. Census Particulars.—On the Personal Card used at the Census of 4th April, 1921, an inquiry as to naturalization was made, all persons who were British subjects by naturalization being required to indicate the fact by inserting the letter "N" in the place provided for the purpose on the card. In addition, in checking the cards in the Census Bureau, instructions were given that cases of women naturalized by marriage to British subjects, and of children naturalized by residence with parents who have become British subjects, should be duly taken into account by the insertion of the letter "N" if originally omitted. The results of the tabulation will be found in the following table :—

NATURALIZATION.—NATURALIZED BRITISH SUBJECTS, CENSUS OF 4th APRIL, 1921.

Particulars.	States.						Territories.		Australia.
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern.	Fed. Cap.	
Males ..	9,300	6,357	9,654	3,098	2,751	568	57	14	31,799
Females ..	3,249	2,434	5,764	1,411	856	223	6	3	13,946
Persons ..	12,549	8,791	15,418	4,509	3,607	791	63	17	45,745

§ 12. Population of Territories.

At the Census of the 4th April, 1921, special arrangements were made to obtain complete and uniform information concerning each of the five Territories of the Commonwealth, viz. :—(1) Northern Territory ; (2) Federal Capital Territory ; (3) Norfolk Island ; (4) Papua ; and (5) Territory of New Guinea.

The work of Census enumeration in each Territory was carried out under the direction of the Commonwealth Supervisor of Census, the local organization in each Territory being under the control of a Deputy Supervisor of Census stationed in each Territory. On the conclusion of the collection the whole of the material was forwarded to the Census Office, Melbourne, for tabulation in conjunction with the data for Australia. A summary of the population and number of dwellings in each Territory is shown in the following table :—

POPULATION AND DWELLINGS.—TERRITORIES, 4th APRIL, 1921.

(EXCLUSIVE OF FULL-BLOOD ABORIGINALS IN THE NORTHERN AND FEDERAL CAPITAL TERRITORIES AND OF THE INDIGENOUS POPULATION OF PAPUA AND NEW GUINEA).

Territory.	Population.			Dwellings.			Total.
	Males.	Females.	Persons.	Occupied.	Unoccupied.	Being Built.	
Northern Territory ..	2,821	1,046	3,867	1,074	138	1	1,213
Federal Capital Territory ..	1,567	1,005	2,572	526	29	..	555
Norfolk Island	339	378	717	168	22	3	193
Papua	1,408	670	2,078	672	43	4	719
Territory of New Guinea ..	2,502	671	3,173	1,056	18	..	1,074

§ 13. The Aboriginal Population.

In Official Year Book No. 17, pp. 951 to 961, a brief account was given of the Australian aboriginal population, its origin, its numbers as estimated from time to time, and the steps taken for its protection. Pages 910 to 912 of this issue contain a statement showing the numbers of full-blood and half-caste aboriginals in each of the States and Territories of Australia at successive periods.

§ 14. The Chinese in Australia.

In Official Year Book No. 18, pp. 951 to 956, a brief historical sketch was given regarding "The Chinese in Australia," but limitations of space preclude its repetition in the present volume.

§ 15. The Pacific Islanders in Australia.

In Official Year Book No. 19, pp. 902–3, a brief account was given of the introduction of Kanakas into Australia.

CHAPTER XXV.

VITAL STATISTICS.

§ 1. Births.

1. **Births, 1923 to 1927.**—The number of male and female births and the total births registered in Australia during the years 1923 to 1927 are shown in the tables hereunder. The numerical relation which these births bear to the population, and various other associated features, are given in later tables.

MALE BIRTHS, 1923 TO 1927.

Year.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust	Tas.	North. Ter.	Fed. Cap. Ter.	Australia.
1923		27,713	18,565	10,163	5,976	4,014	2,888	40	6	69,365
1924		27,350	18,500	10,050	5,941	4,215	2,700	29	15	68,800
1925		27,878	18,592	10,316	5,824	4,210	2,664	36	22	69.542
1926		27,217	18,203	10,132	5,906	4,306	2.584	40	34	68,422
1927	Single births	27,198	17,650	9,965	5,750	4,276	2,458	32	45	67,374
	Twins ..	582	414	221	112	87	57	..	..	1,473
	Triplets ..	12	4	11	3	3	..	..	..	33
	Total births	27,792	18.068	10,197	5,865	4,366	2,515	32	45	68,880

FEMALE BIRTHS, 1923 TO 1927.

Year.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust	Tas.	North. Ter.	Fed. Cap. Ter.	Australia.
1923		26,356	17.312	9,819	5,716	3,840	2,769	32	13	65,857
1924		26,355	17,640	9,658	5,651	4,086	2,683	28	26	66,127
1925		26,737	17,330	9,967	5.633	3,975	2,554	29	25	66,250
1926		25,899	17,159	9,632	5,577	3,995	2,404	33	41	64,740
1927	Single births	25,467	16,626	9,408	5,503	4,038	2,270	36	32	63,380
	Twins ..	568	375	220	124	78	48	..	..	1,413
	Triplets ..	12	5	8	..	..	..	..	..	25
	Total births	26,047	17,006	9,636	5.627	4,116	2,318	36	32	64,818

TOTAL BIRTHS, 1923 TO 1927.

Year.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust	Tas.	North. Ter.	Fed. Cap. Ter.	Australia.
1923		54,069	35,877	19,982	11,692	7,854	5,657	72	19	135,222
1924		53,705	36,140	19,708	11,592	8,301	5,383	57	41	134,927
1925		54,615	35,922	20,283	11,457	8,185	5,218	65	47	135.792
1926		53,116	35,362	19,764	11,483	8,301	4,988	73	75	133,162
1927	Single births	52,665	34,276	19,373	11,253	8,314	4.728	68	77	130,754
	Twins ..	(a)1,150	(b) 789	(b) 441	236	(c) 165	(c)105	..	..	(d)2,886
	Triplets ..	24	9	(e) 19	3	3	..	..	..	(e) 58
	Total births	53,839	35,074	19,833	11,492	8,482	4,833	68	77	133,698

(a) Ten stillborn twins not included.
(b) Three stillborn twins not included.
(c) One stillborn twin not included.
(d) Eighteen stillborn twins not included.
(e) Two stillborn triplets not included.

2. **Birth Rates.**—The next table gives the crude birth rates for the years 1923 to 1927.

CRUDE BIRTH RATE(*a*), 1923 TO 1927.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern Territory.	Federal Capital Territory.	Australia.
1923 ..	24.68	22.31	24.89	22.60	22.55	26.27	19.94	5.73	23.77
1924 ..	24.11	22.01	23.87	21.88	23.09	25.07	15.82	10.65	23.24
1925 ..	24.01	21.49	23.82	21.06	22.23	24.44	17.69	9.96	22.89
1926 ..	22.89	20.84	22.58	20.55	22.14	23.62	19.39	12.28	22.02
1927 ..	22.69	20.30	22.24	20.12	22.03	23.01	16.06	10.49	21.67

(*a*) Number of births per 1,000 of the mean annual population.

Generally speaking the crude birth rate of Australia has shown a constant decline for many years, and the rate for 1927 is the lowest yet recorded.

The principal factor in determining the crude birth rate is the proportion of *married* women of child-bearing age in the community, but as the fecundity of women varies with age, the birth rate per 1,000 married women will vary according to the age composition of the group, and, other things being equal, the rate generally should be highest where the average age of married women is lowest. For the purposes of the following table the child-bearing age has been taken as from 15–44 years inclusive, and all births of which the mothers were stated to be over 45 years have been counted in the group 40–44.

The following table shows some of the more important factors which affect the birth rates, also the birth rates computed on various bases as follows:—Births per 1,000 of the population (crude); births per 1,000 women of child-bearing age; nuptial births per 1,000 married women of child-bearing age; births per 1,000 married women of child-bearing age corrected for inequalities in the age composition by taking the female population of Australia as a whole for a standard; and ex-nuptial births per 1,000 unmarried women aged 15–44 inclusive. The results are obtained from the births during the years 1920, 1921, and 1922 in relation to the age and conjugal condition of the population at the time of the Census of the 4th April, 1921.

The rates obtained from these computations place Tasmania first, and Queensland second, although the proportions of married women of child-bearing age in their populations were lower than the average for Australia. This result was due to the relatively low average age of the married women in these States, and the large proportion of ex-nuptial births. The relatively low proportion of married women of child-bearing age in Queensland was due to the large number of adult males employed in localities unsuited to women, a circumstance which accounts for the high masculinity of the population.

In Tasmania the relatively small proportion of married women arises from conditions directly opposite to those in Queensland. In the island State the numbers of the sexes were almost equal, while large numbers of the young adults emigrate to the mainland, leaving a population with abnormally high proportions of very young and very old. Although the proportion of married women of child-bearing age was lower in Tasmania than in Queensland, and the average age was the same in both States, Tasmania had the greater weight in the more productive age-groups—from 15 to 24 years.

Western Australia, though fifth in order of the crude birth rates, takes third place when the rates are computed in relation to women only, the change in position being due to the high masculinity. Although the average age of married women of reproductive ages was higher than in any other State, the uncorrected birthrate for nuptial births per 1,000 married women was higher than in New South Wales, Victoria, or South Australia. The adjustment for age improves the status of Western Australia very considerably, though not sufficiently to alter the sequence of its position.

The crude birth rate placed New South Wales third, but on the adjusted rate per 1,000 married women it takes fifth place. The high position of New South Wales in regard to crude birth rates was due rather to the large proportion in the population of married women of child-bearing age than to their productiveness.

Victoria was the only State with an excess of females in its population, and the proportion to the total population of women aged 15–44 was the largest among the States, but as the proportion of these who were married was the lowest, the primary factor in the crude birth rate, viz., the proportion to the total population of married women of reproductive ages was the smallest.

The difference between the adjusted birth rates per 100 married women of child-bearing ages for New South Wales and Victoria was very small, and the proportions of ex-nuptial to all births in these States were almost identical.

Although 12.53 per cent. of its total population consisted of married women of child-bearing age—against an average of 12.20 for Australia—South Australia occupies fourth place in the order of crude birth rates. The advantage from its high proportion of potentially productive women was to some extent counteracted by their average age being somewhat above the average for Australia, while its position was also affected by the very small proportion of ex-nuptial births. The number of nuptial births per 100 married women of child-bearing age in South Australia represented 18.71, as against 19.65 for Australia, but the difference was somewhat reduced by the adjusting process which makes the rate for South Australia 18.99 as against the Australian rate of 19.65.

BIRTH RATES, AND FACTORS AFFECTING THEM.—AVERAGE OF YEARS 1920, 1921, 1922.

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Australia.
Crude birth rate per 1,000 persons	25.99	23.54	26.72	24.23	24.14	26.99	25.15
Birth rate per 100 women 15–44 incl. ..	11.04	9.79	11.83	10.25	11.05	11.91	10.74
Birth rate per 100 married women 15-44 incl.(*a*)	19.39	19.29	21.26	18.71	19.62	21.83	19.65
Birth rate per 100 married women 15–44 incl. (corrected for age variation)	19.14	19.44	20.77	18.99	20.44	21.24	19.65
Ex-nuptial births—per cent. on all births ..	4.82	4.84	5.00	3.28	4.02	5.11	4.69
Ex-nuptial births per 100 unmarried women 15–44 incl.	1.16	0.92	1.26	0.72	0.92	1.26	1.05
Women 15–44 incl.—per cent. all persons ..	23.54	24.02	22.57	23.65	21.83	22.67	23.41
Average age of all women 15–44 incl. ..	28.67	28.61	28.09	28.73	28.45	28.10	28.54
Married women 15–44 incl.—per cent. on all persons	12.75	11.61	11.93	12.53	11.81	11.73	12.20
Average age of married women 15–44 incl. ..	32.24	32.74	32.16	32.67	33.02	32.16	32.48

(*a*) Nuptial births only.

The following figures give a comparison for Australia, at Census periods from 1880, of the total births per 1,000 women (married and unmarried) and of the nuptial births per 1,000 married women of ages 15 to 44 inclusive :—

Particulars.	1880–82.	1890–92.	1900–02.	1910–12.	1920–22.
Births per 1,000 women aged 15–44	169.7	158.8	117.3	117.2	107.4
Nuptial births per 1,000 married women 15–44 ..	321.0	332.0	235.8	236.0	196 5

3. Birth Rates of Various Countries.—(i) *Crude Rates.* A comparison with other countries shows that the Australian States occupy a midway position, which is, however, counterbalanced by a still lower position in regard to their death rates, as evidenced in the table hereinafter in the section dealing with "Deaths."

CRUDE BIRTH RATES(*a*).—VARIOUS COUNTRIES.

Country.	Year.	Rate.
Egypt	1927	50.6
Soviet Republics ..	1925	44.9
Chile	1927	44.8
Ceylon	1927	39.5
Jamaica	1924	36.8
Rumania	1926	35.8
Japan	1927	33.6
Quebec (Canada) ..	1927	31.9
Argentine	1926	31.1
Spain	1927	28.6
Italy	1927	26.4
Union of South Africa (whites)	1926	26.2
Uruguay	1926	25.4
Hungary	1927	25.2
Bulgaria	1927	24.6
Canada (including Quebec)	1927	24.6
Czecho-Slovakia ..	1927	23.3
Netherlands	1927	23.1
Tasmania	1927	23.0
New South Wales ..	1927	22.7
Queensland	1927	22.2
Western Australia ..	1927	22.0
Australia	**1927**	**21.7**
Finland	1926	21.7
Northern Ireland ..	1927	21.3
Ontario (Canada) ..	1927	21.2
United States (*b*) ..	1927	20.4
New Zealand ..	1927	20.3
Victoria	1927	20.3
Irish Free State ..	1927	20.3
South Australia ..	1927	20.1
New York State ..	1927	19.9
Scotland	1927	19.8
Prussia	1926	19.6
Denmark	1927	19.6
Great Britain and Northern Ireland ..	1927	18.3
Germany	1927	18.3
Norway	1927	18.2
Belgium	1927	18.2
France	1927	18.1
Austria	1927	17.8
Switzerland ..	1927	17.4
England and Wales	1927	16.7
Sweden	1927	16.1

(*a*) Number of births per 1,000 of the mean population. (*b*) Figures for "provisional birth-registration area" which includes about 76 per cent. of the population.

(ii) *Nuptial Birth Rates at Child-bearing Ages.* The wide discrepancies between the crude birth rates of the various countries are, to some extent, due to differences in sex and age constitution and in conjugal condition. If the birth rates be calculated per 1,000 women of child-bearing ages, the comparison gives more reliable results. The comparative results given in the following table have been taken from the Annuaire International de Statistique, and are based on ages 15 to 49 years, Australia with a rate of 198 being, again, midway between maximum and minimum :—

NUPTIAL BIRTH RATES PER 1,000 MARRIED WOMEN AGED 15 TO 49 YEARS.—VARIOUS COUNTRIES.

Country.	Period.	Rate.
Bulgaria	1910–11	280
Ireland	1909–12	250
Netherlands	1905–14	233
Finland	1906–15	230
Italy	1907–14	226
Norway	1907–14	224
Austria	1908–13	219
Spain	1906–15	218
Prussia	1907–14	204
Scotland	1906–15	202
Australia	**1906–15**	**198**
Hungary	1906–15	198
Germany	1907–14	196
Sweden	1908–13	196
Denmark	1906–15	191
New Zealand ..	1906–15	188
Switzerland ..	1906–15	184
England and Wales	1906–15	171
Belgium	1908–13	161
France	1910–11	114

4. Masculinity of Births.—(i) *General.* The masculinity of births, i.e., the excess of males over females per 100 births registered, during the last five years varied from 0.32 in Tasmania in 1924 to 4.08 in the same State in 1927. On account of the smallness of the numbers, the returns from the Northern Territory and the Federal Capital Territory have not been taken into consideration. The following table gives particulars for the years 1923 to 1927.

MASCULINITY(a) OF BIRTHS REGISTERED, 1923 TO 1927.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern Territory.	Federal Capital Territory.	Australia.
1923 ..	2.51	3.49	1.72	2.22	2.22	2.10	11.11	−36.84	2.59
1924 ..	1.85	2.38	1.99	2.50	1.55	0.32	1.75	−26.83	1.98
1925 ..	2.09	3.51	1.72	1.67	2.87	2.11	10.77	−6.38	2.42
1926 ..	2.48	2.95	2.53	2.87	3.75	3.61	9.59	−9.33	2.77
1927 ..	3.24	3.03	2.83	2.07	2.95	4.08	−5.88	16.88	3.04

(a) Excess of males over females per 100 total births.
NOTE.—The minus sign (−) denotes an excess of females over males per 100 total births.

(ii) *Masculinity of Ex-nuptial Births.* The masculinity of ex-nuptial births was as follows :—

MASCULINITY(a) OF EX-NUPTIAL BIRTHS, 1923 TO 1927.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern Territory	Federal Capital Territory.	Australia.
1923 ..	2.54	2.07	2.13	0.00	−5.96	−3.98	10.34	−100.00	1.72
1924 ..	3.21	−0.96	0.19	2.54	2.14	−5.26	7.69	100.00	1.20
1925 ..	4.12	4.86	−3.38	−4.18	8.66	−2.83	25.00	..	2.46
1926 ..	1.13	2.06	1.80	1.42	5.85	4.76	36.36	−66.66	1.97
1927 ..	3.83	4.24	6.11	−4.97	−0.30	7.81	−15.38	..	3.67

(a) Excess of males over females per 100 total ex-nuptial births.
NOTE.—The minus sign (−) denotes an excess of females over males per 100 total ex-nuptial births.

Although the general tendency of the change in the sex composition of the ex-nuptial births has been the same as in the total births, the results in the smaller States do not show the same consistency in the former as in the latter on account of the relatively small numbers involved.

(iii) *Masculinity of Nuptial and Ex-nuptial Births, Various Countries.* There is ordinarily a very small difference between the masculinity of nuptial and ex-nuptial births. Thus, according to the following table, for periods from 1914 to 1925, the masculinity in various countries ranged from 4.72 to 2.26, and from 4.97 to 0.11 for nuptial and ex-nuptial births respectively.

MASCULINITY OF BIRTHS.—VARIOUS COUNTRIES.

Country.	Period.	Masculinity of Births.(a)		Country.	Period.	Masculinity of Births.(a)	
		Nuptial Live Births.	Ex-nuptial Live Births.			Nuptial Live Births.	Ex-nuptial Live Births.
Spain ..	1914–22	4.72	3.11	Denmark ..	1914–23	2.66	2.50
Hungary ..	1915–22	3.55	1.79	Italy ..	1914–23	2.64	2.39
Prussia ..	1914–24	3.37	2.96	**Australia ..**	**1914–25**	**2.61**	**2.57**
Germany ..	1914–23	3.30	3.03	Switzerland	1914–23	2.55	2.86
Finland ..	1914–23	3.03	2.35	Uruguay ..	1914–23	2.55	4.97
Irish Free State ..	1922–25	2.95	4.30	Northern Ireland ..	1913–23	2.48	2.73
Austria ..	1914–21	2.95	2.53	France ..	1912–19	2.46	1.75
Sweden ..	1914–20	2.93	2.59	Scotland ..	1914–23	2.38	2.05
Netherlands	1914–24	2.85	2.39	Japan ..	1914–24	2.34	0.11
Belgium ..	1919–23	2.82	1.51	England and Wales ..	1914–25	2.30	2.07
New Zealand	1914–25	2.72	1.48	Chile ..	1918–23	2.26	2.23
Norway ..	1914–22	2.71	3.64				
Canada (excluding Quebec) ..	1921–24	2.68	3.53				

(a) Excess of males over females per 100 total births.

5. Ex-nuptial Births.—(i) *General.* The number of ex-nuptial births reached its maximum, 7,438, in 1913, but it has since fallen considerably. On the average of the five years 1910–14, the number of ex-nuptial births in Australia was 7,171, while for the period 1923–27 it was only 6,278, a decline of 12.5 per cent., whereas the annual average total births for the same period increased by 4.2 per cent.; hence a comparison between the results for these two periods shows that the proportion of ex-nuptial births has fallen from 5.55 to 4.66 per cent. of all births.

It is, of course, possible that the number of ex-nuptial births is somewhat understated, owing to diffidence in proclaiming the fact of ex-nuptiality, and it is not unlikely that the majority of unregistered births are ex-nuptial.

EX-NUPTIAL BIRTHS, 1923 TO 1927.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern Territory.	Federal Capital Territory.	Australia.
1923 ..	2,676	1,595	1,079	360	285	251	29	1	6,276
1924 ..	2,589	1,668	1,052	355	327	228	13	1	6,233
1925 ..	2,764	1,543	1,035	359	335	247	24	..	6,307
1926 ..	2,747	1,603	1,000	353	325	231	22	3	6,284
1927 ..	2,691	1,556	1,063	362	335	256	26	..	6,289

(ii) *Rate of Ex-nuptiality, 1923 to 1927.* The rate of ex-nuptiality, i.e., the percentage of ex-nuptial on total births increased from 4.64 in 1923 to 4.70 in 1927. On the basis of the figures given in the preceding sub-section the ex-nuptial rate fell from 5.55 per cent. of all births during the years 1910–14 to 4.66 per cent. for the years 1923–27.

PERCENTAGE OF EX-NUPTIAL ON TOTAL BIRTHS, 1923 TO 1927.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern Territory.	Federal Capital Territory.	Australia.
	%	%	%	%	%	%	%	%	%
1923 ..	4.95	4.45	5.40	3.08	3.63	4.44	40.28	5.26	4.64
1924 ..	4.82	4.62	5.34	3.06	3.94	4.24	22.81	2.44	4.62
1925 ..	5.06	4.30	5.10	3.13	4.09	4.73	36.92	..	4.64
1926 ..	5.17	4.53	5.06	3.07	3.92	4.63	30.14	4.00	4.72
1927 ..	5.00	4.44	5.36	3.15	3.95	5.30	38.24	..	4.70

A better comparison is obtained by calculating the number of ex-nuptial births per thousand of the single and widowed female population between the ages of 15 and 45. The number of ex-nuptial births per 1,000 unmarried women of ages 15 to 45 has been found to be as follows:—Years 1880–82, 14.49; years 1890–92, 15.93; years 1900–02, 13.30; years 1910–12, 12.53; and years 1920–22, 10.50. The comparative results given in the following table have been taken from the Annuaire International de Statistique, Vols. II. and V., and are based on ages 15 to 49 years:—

EX-NUPTIAL BIRTHS PER 1,000 UNMARRIED WOMEN AGED 15 TO 49 YEARS.—VARIOUS COUNTRIES.

Country.	Period.	Rate.	Country.	Period.	Rate.
Hungary	1906–15	38	Norway	1907–14	13
Austria	1908–13	30	Scotland	1906–15	13
Sweden	1908–13	26	**Australia**	**1906–15**	**12**
Denmark	1906–15	24	Belgium	1908–13	12
Germany	1907–14	23	New Zealand ..	1906–15	9
Prussia	1907–14	21	Switzerland ..	1906–15	8
Finland	1906–15	17	England and Wales ..	1906–15	7
France	1901–11	16	Netherlands ..	1905–14	5
Italy	1907–14	14	Ireland	1909–12	4
Spain	1906–15	14	Bulgaria	1910–11	4

(iii) *Comparison of Rates.* The following table shows the relative proportions of ex-nuptial and nuptial births to the total population during the last five years :—

CRUDE EX-NUPTIAL, NUPTIAL, AND TOTAL BIRTH RATES (*a*).—AUSTRALIA, 1923 TO 1927.

Rates.	1923.	1924.	1925.	1926.	1927.
Ex-nuptial	1.10	1.07	1.06	1.07	1.02
Nuptial	22.67	22.17	21.83	20.95	20.65
Total	23.77	23.24	22.89	22.02	21.67

(*a*) Number of births per 1,000 of mean population.

6. **Multiple Births.**—Among the total number of 133,698 births registered in Australia in 1927, there were 130,754 single births, 2,886 twins, and 58 triplets. The number of cases of twins was 1,452, there being 18 stillbirths, and there were 20 cases of triplets, including 2 stillbirths. The total number of mothers was, therefore, 132,226; the proportion of mothers of twins being one in every 91, and of mothers of triplets one in every 6,611 of total mothers.

MULTIPLE BIRTHS.—AUSTRALIA, 1907 TO 1927.

Year.	Cases of Twins.	Cases of Triplets.	Cases of Quadruplets.	Total Multiple Births.	Percentage of Cases of Multiple Births on Total Mothers.	Number of Mothers to Each Multiple Birth.
1907	1,029	14	..	1,043	0.95	105
1908	1,059	6	..	1,065	0.96	104
1909	1,128	14	..	1,142	1.01	99
1910	1,176	13	..	1,189	1.03	97
1911	1,222	14	..	1,236	1.02	98
1912	1,334	16	..	1,350	1.02	98
1913	1,361	8	..	1,369	1.02	98
1914	1,395	11	..	1,406	1.03	97
1915	1,407	10	..	1,417	1.06	94
1916	1,371	12	..	1,383	1.06	94
1917	1,477	17	1	1,495	1.16	86
1918	1,362	8	..	1,370	1.10	91
1919	1,311	15	1	1,327	1.09	91
1920	1,505	16	..	1,521	1.13	89
1921	1,453	12	..	1,465	1.09	92
1922	1,432	12	..	1,444	1.06	94
1923	1,394	6	..	1,400	1.05	96
1924	1,337	12	..	1,349	1.01	99
1925	1,458	11	..	1,469	1.09	91
1926	1,412	11	..	1,423	1.08	93
1927	1,452	20	..	1,472	1.11	90

7. Ages of Parents.—(i) *Single Births.* The relative ages of the parents of children registered in 1927 have been tabulated separately for male and female births, twins and triplets being distinguished from single births, and are shown for single ages and for every State in the Bulletin of "Australian Demography," No. 45, published by this Bureau. In the present work the exigencies of space allow only the insertion of corresponding tables showing the relative ages of parents in groups of five years.

AGES OF PARENTS IN CASES OF SINGLE BIRTHS.—AUSTRALIA, 1927.

Ages of Fathers and Sexes of Children.		Total Children.	Ages of Mothers.								
			Under 15.	15 to 19.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 and upwards.	Unspecified.
Under 20	Males..	392	..	307	83	2	..	..	..	..	..
	Females	363	1	268	92	2	..	..	..	..	..
	Total ..	755	1	575	175	4	..	..	..	..	..
20 to 24	Males..	7,969	1	1,943	5,027	862	118	15	3	..	..
	Females	7,352	2	1,764	4,665	819	87	15	..	..	..
	Total ..	15,321	3	3,707	9,692	1,681	205	30	3	..	..
25 to 29	Males..	16,187	..	765	6,377	7,481	1,396	154	14	..	..
	Females	15,400	..	716	6,136	7,097	1,255	182	10	4	..
	Total ..	31,587	..	1,481	12,513	14,578	2,651	336	24	4	..
30 to 34	Males..	15,570	..	178	2,234	6,284	5,776	1,006	89	3	..
	Females	14,602	..	178	2,142	5,875	5,347	976	84	..	..
	Total ..	30,172	..	356	4,376	12,159	11,123	1,982	173	3	..
35 to 39	Males..	12,415	..	55	659	2,604	4,730	3,914	441	9	3
	Females	11,765	..	62	694	2,422	4,478	3,691	411	7	..
	Total ..	24,180	..	117	1,353	5,026	9,208	7,605	852	16	3
40 to 44	Males..	6,889	..	12	200	754	1,864	2,718	1,305	36	..
	Females	6,501	..	17	224	643	1,733	2,588	1,251	45	..
	Total ..	13,390	..	29	424	1,397	3,597	5,306	2,556	81	..
45 to 49	Males..	3,091	..	3	67	218	604	1,147	918	134	..
	Females	2,907	..	5	51	203	565	1,080	888	115	..
	Total ..	5,998	..	8	118	421	1,169	2,227	1,806	249	..
50 to 54	Males..	1,106	..	1	9	69	180	366	397	84	..
	Females	1,017	..	4	21	73	168	337	352	62	..
	Total ..	2,123	..	5	30	142	348	703	749	146	..
55 to 59	Males..	404	..	1	12	25	64	133	139	30	..
	Females	354	..	2	10	25	54	119	114	30	..
	Total ..	758	..	3	22	50	118	252	253	60	..
60 to 64	Males..	115	..	..	..	14	17	37	36	11	..
	Females	101	..	..	2	7	15	33	40	4	..
	Total ..	216	..	..	2	21	32	70	76	15	..
65 and upwards	Males..	48	..	..	3	1	11	16	14	3	..
	Females	53	..	..	1	2	11	18	19	2	..
	Total ..	101	..	..	4	3	22	34	33	5	..
Unspecified	Males..	2	..	..	1	1	..	..	..	..	..
	Females	5	..	..	..	1	2	1	1	..	..
	Total ..	7	..	..	1	2	2	1	1	..	..
Nuptial children	Males..	64,188	1	3,265	14,672	18,315	14,760	9,506	3,356	310	3
	Females	60,420	3	3,016	14,038	17,169	13,715	9,040	3,170	269	..
	Total ..	124,608	4	6,281	28,710	35,484	28,475	18,546	6,526	579	3
Ex-nuptial children	Males..	3,186	14	959	1,065	510	300	243	85	5	5
	Females	2,960	12	895	1,016	466	276	205	79	8	3
	Total ..	6,146	26	1,854	2,081	976	576	448	164	13	8
Total children	Males..	67,374	15	4,224	15,737	18,825	15,060	9,749	3,441	315	8
	Females	63,380	15	3,911	15,054	17,635	13,991	9,245	3,249	277	3
	Total ..	130,754	30	8,135	30,791	36,460	29,051	18,994	6,690	592	11

(ii) *Twins.* The ages of parents of twins in 1927 are given hereunder :—

AGES OF PARENTS OF TWINS.—AUSTRALIA, 1927.

Ages of Fathers and Sexes of Children.		Total Children.	Ages of Mothers.						
			Under 20.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 and over.
Under 20 ..	Males ..	10	4	6	..	..	..	..	..
	Females ..	8	6	2	..	..	..	..	..
	Total ..	18	10	8	..	..	..	..	..
20 to 24 ..	Males ..	98	21	56	17	4	..	..	..
	Females ..	111	9	85	15	2	..	..	..
	Total ..	209	30	141	32	6	..	..	..
25 to 29 ..	Males ..	308	11	94	168	27	8	..	..
	Females ..	301	5	102	158	28	6	2	..
	Total ..	609	16	196	326	55	14	2	..
30 to 34 ..	Males ..	354	1	34	128	150	37	4	..
	Females ..	326	3	30	122	126	43	2	..
	Total ..	680	4	64	250	276	80	6	..
35 to 39 ..	Males ..	318	..	11	39	134	120	14	..
	Females ..	287	2	13	31	106	117	18	..
	Total ..	605	2	24	70	240	237	32	..
40 to 44 ..	Males ..	195	..	5	15	44	87	44	..
	Females ..	189	..	7	9	49	86	38	..
	Total ..	384	..	12	24	93	173	82	..
45 to 49 ..	Males ..	88	..	1	1	22	48	14	2
	Females ..	87	..	3	3	18	42	21	..
	Total ..	175	..	4	4	40	90	35	2
50 to 54 ..	Males ..	24	..	..	..	6	10	6	2
	Females ..	25	..	2	..	8	9	4	2
	Total ..	49	..	2	..	14	19	10	4
55 to 59 ..	Males ..	6	..	..	..	3	1	2	..
	Females ..	12	..	..	..	1	5	6	..
	Total ..	18	..	..	..	4	6	8	..
60 and over ..	Males ..	4	..	..	1	..	1	..	2
	Females ..	1	..	..	..	..	1	..	..
	Total ..	5	..	..	1	..	2	..	2
Nuptial Children ..	Males ..	1,405	37	207	369	390	312	84	6
	Females ..	1,347	25	244	338	338	309	91	2
	Total ..	2,752	62	451	707	728	621	175	8
Ex-nuptial Children ..	Males ..	68	7	10	14	14	23	..	..
	Females ..	66	7	21	13	10	11	4	..
	Total ..	134	14	31	27	24	34	4	..
Total Children ..	Males ..	1,473	44	217	383	404	335	84	6
	Females ..	1,413	32	265	351	348	320	95	2
	Total ..	2,886	76	482	734	752	655	179	8

(iii) *Triplets.* Particulars regarding the ages of parents in cases of triplets are given in the next table :—

AGES OF PARENTS OF TRIPLETS.—AUSTRALIA, 1927.

Ages of Fathers and Sexes of Children.		Total Children.	Ages of Mothers.														
			19.	23.	25.	27.	28.	29.	31.	32.	33.	34.	35.	36.	38.	39.	41.
20	M.	2	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	F.	1	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..
24	F.	3	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..
27	F.	2	..	..	..	..	2*a*	..	..	..	..	..	..	..	..	..	..
30	M.	5	..	..	3	..	..	..	..	..	2	..	..	..	..	..	..
	F.	1	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..
31	M.	3	..	..	..	2	..	..	1	..	..	..	..	..	..	..	..
	F.	3	..	..	..	1	..	..	2	..	..	..	..	..	..	..	..
33	M.	5	..	..	..	..	2*a*	..	..	..	3	..	..	..	..	..	..
35	M.	4		..	..	..	..	3	..	..	..	..	1	..	..	..	..
	F.	2	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..
37	M.	2	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..
	F.	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..
38	M.	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..
	F.	2	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..
41	M.	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
	F.	2	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..
42	F.	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	3
53	M.	2	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..
	F.	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..
58	M.	2	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..
	F.	1	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..
Total Nuptial Children ..	M.	27	2	..	3	2	4	3	1	1	5	..	1	2	2	1	..
	F.	22	1	3	..	1	3	..	2	2	1	..	2	1	1	2	3
Ex-nuptial Children ..	M.	6	..	..	1	..	..	..	..	..	..	2	3	..	..	..	..
	F.	3	..	..	2	..	..	..	..	..	..	1	..	..	..	..	..
Total Children ..	M.	33	2	..	4	2	4	3	1	1	5	2	4	2	2	1	..
	F.	25	1	3	2	1	3	..	2	2	1	1	2	1	1	2	3

a Excluding one triplet still-born.

8. Birthplaces of Parents.—The relative birthplaces of the parents of children whose births were registered during the year 1927 will be found in the Bulletin of "Australian Demography," published by this Bureau. A summary of the results of the tabulation is given hereunder.

BIRTHPLACES OF PARENTS.—AUSTRALIA, 1927.

Birthplaces.	Fathers.			Mothers of Nuptial Children.			Mothers of Ex-nuptial Children.		
	Single Births.	Twins.	Triplets.	Single Births.	Twins.	Triplets.	Single Births.	Twins.	Triplets.
AUSTRALASIA—									
New South Wales	40,869	442	6	42,388	474	5	2,273	25	..
Victoria ..	31,139	346	3	30,734	340	3	1,385	16	..
Queensland ..	13,695	151	1	15,173	160	4	901	12	1
South Australia ..	10,388	113	..	10,180	109	..	328	3	1
Western Australia	3,366	29	..	4,450	33	1	244	1	..
Tasmania ..	5,417	63	..	5,426	60	..	369	4	..
Northern Territory	37	..	..	47	..	..	28	..	..
Federal Capital Territory ..	16	1	..	14	..	..	..	..	..
New Zealand ..	922	11	..	676	4	..	43	..	..

BIRTHPLACES OF PARENTS.—AUSTRALIA, 1927—*continued.*

Birthplaces.	Fathers.			Mothers of Nuptial Children.			Mothers of Ex-nuptial Children.		
	Single Births.	Twins.	Triplets.	Single Births.	Twins.	Triplets.	Single Births.	Twins.	Triplets.
EUROPE—									
England and Wales	11,524	121	3	10,016	140	2	377	6	1
Scotland ..	2,842	43	1	2,600	31	1	108	..	..
Ireland	1,230	21	..	860	13	..	31	1	..
Other British Possessions in Europe	149	1	..	100	1	..	1	..	..
Denmark ..	101	3	..	20	1	..	1	..	..
France	41	..	..	52	..	..	..	..	..
Germany ..	304	4	..	142	..	..	10	..	..
Greece	302	6	1	227	6	1	..	..	..
Italy	625	4	..	478	4	..	8	..	..
Netherlands ..	52	1	..	18	..	..	..	..	..
Norway ..	65	1	..	19	1	..	..	..	..
Poland	50	..	..	27	1	..	..	..	..
Russia	159	4	..	98	2	..	..	..	..
Sweden	96	3	..	11	..	..	..	..	..
Switzerland ..	49	..	..	30	..	..	..	..	..
Other Countries in Europe ..	233	3	..	116	2	..	3	..	..
ASIA—									
British India and Ceylon ..	145	3	1	81	..	..	1	..	..
China	96	..	..	28	..	..	3	..	..
Japan	15	..	..	7	..	..	..	..	..
Syria	104	1	..	95	..	..	2	..	..
Other Countries in Asia	47	2	..	31	..	..	..	..	..
AFRICA—									
Union of South Africa ..	138	..	..	174	1	..	7	..	..
Other African Countries ..	29	..	..	32	..	..	..	..	..
AMERICA—									
Canada	74	1	..	36	..	..	2	..	..
United States of America ..	140	4	..	95	..	..	2	..	..
Other American Countries ..	61	..	..	36	1	..	3	..	..
POLYNESIA—									
Fiji	23	1	..	17	..	..	1	..	..
New Caledonia ..	19	1	..	29	..	..	2	..	..
New Hebrides ..	3	..	..	2	..	..	..	..	..
Other Polynesian Islands ..	13	..	1	9	..	..	1	..	..
At Sea	27	..	..	25	..	..	1	..	..
Unspecified ..	3	..	..	9	..	..	11	..	..
Total ..	124,608	1,384	17	124,608	1,384	17	6,146	68	3

9. Occupations of Fathers.—(i) *Year 1927.* A summary of the main groups of occupations of the fathers of all nuptial children whose births were registered in 1927 is given in the following table :—

OCCUPATIONS OF FATHERS OF NUPTIAL CHILDREN.—AUSTRALIA, 1927.

Occupations.	Number of Fathers.	Occupations.	Number of Fathers.
CLASS I.—PROFESSIONAL.		CLASS V.—INDUSTRIAL.	
Government, Defence, Law	2,484	Art and Mechanic Productions	7,048
Others	3,550	Textiles and Fibrous Materials	1,869
Total Class I.	6,034	Food and Drinks	2,272
		Animal and Vegetable Substances	651
		Metals and Minerals	3,281
		Fuel, Light, and Energy	1,289
		Building and Construction	7,718
CLASS II.—DOMESTIC.		Others	30,461
Board and Lodging	1,102	Total Class V.	54,589
Others	1,061		
Total Class II.	2,163		
CLASS III.—COMMERCIAL.		CLASS VI.—AGRICULTURAL, PASTORAL, MINING, ETC.	
Property and Finance	1,593	Agricultural	19,647
Art, Mechanic, and Textile Products	1,100	Pastoral	4,689
Food and Drinks	4,160	Mining and Quarrying	2,921
Animal and Vegetable Substances	385	Others	1,523
Fuel, Light, and Metals	284	Total Class VI.	28,780
Merchants and Dealers	2,549		
Others	7,584		
Total Class III.	17,655		
CLASS IV.—TRANSPORT AND COMMUNICATION.		CLASS VII.—INDEFINITE.	
Railway Traffic	5,381	Independent Means	193
Road and Tramway Traffic	7,805	Occupation Unspecified	76
Sea and River Traffic	1,450		
Others	1,883	Total Class VII.	269
Total Class IV.	16,519	TOTAL	126,009

(ii) *Summary, 1923 to 1927.* The next table gives a summary in classes of the occupations of fathers of nuptial children in each of the last five years, with the percentage of each class on the total number of fathers. In 1927, 43.32 per cent. of fathers were of the industrial class, and 22.84 per cent. were of the agricultural, pastoral, mining, etc., class.

OCCUPATIONS OF FATHERS OF NUPTIAL CHILDREN.—AUSTRALIA, 1923 TO 1927.

Class.		1923.	1924.	1925.	1926.	1927.
I. Professional ..	No.	6,010	5,946	6,077	6,075	6,034
	%	4.71	4.67	4.74	4.84	4.79
II. Domestic ..	No.	2,242	2,098	2,180	2,119	2,163
	%	1.76	1.64	1.70	1.69	1.72
III. Commercial ..	No.	18,210	18,519	17,978	17,636	17,655
	%	14.27	14.54	14.04	14.05	14.01
IV. Transport and Communication ..	No.	15,244	15,670	16,306	16,247	16.519
	%	11.95	12.30	12.73	12.94	13.11
V. Industrial ..	No.	53,737	53,899	54,214	53,557	54,589
	%	42.11	42.31	42.33	42.66	43.32
VI. Agricultural, pastoral, mining, etc. ..	No.	31,974	31,046	31.082	29,634	28.780
	%	25.06	24.37	24.27	23.61	22.84
VII. Indefinite ..	No.	186	213	244	266	269
	%	0.14	0.17	0.19	0.21	0.21
VIII. Dependents ..	No.	..	..	..	..	..
	%	..	..	..	..	..
Total	No.	127,603	127.391	128,081	125,534	126,009
	%	100.00	100.00	100.00	100.00	100.00

10. Mother's Age, Duration of Marriage, and Issue.—(i) *General.* The total number of nuptial confinements in 1927 was 126,009, viz., 124,608 single births, 1,384 cases of twins, and 17 cases of triplets, but in 38 cases the necessary information was lacking, and the following series of tables refers, therefore, to 125,971 nuptial confinements. Ex-nuptial children—previous issue by the same father—are included as previous issue, but children by former marriages, and stillborn children are excluded. The tables cannot be given *in extenso*, but the following are their most salient features. The complete tabulations are shown in "Australian Demography," No. 45.

(ii) *Duration of Marriage and Issue of Mothers.* The following table shows that the duration of marriage of mothers of nuptial children ranged from less than one year up to between 31 and 32 years, and that the average family increased fairly regularly with the duration of marriage. The average number of children of all marriages was 3.03, the corresponding figures for 1926 being 3.06; for 1925, 3.10; for 1924, 3.08; and for 1923, 3.08.

DURATION OF MARRIAGE AND ISSUE OF MOTHERS.—AUSTRALIA, 1927.

Duration of Marriage.	Total Mothers.	Total Issue.	Average Number of Children.	Duration of Marriage.	Total Mothers.	Total Issue.	Average Number of Children.
Years.				Years.			
0–1 ..	20,172	20,342	1.01	17–18 ..	1,747	12,197	6.98
1–2 ..	11,441	13,059	1.14	18–19 ..	1,369	10,025	7.32
2–3 ..	11,267	19,538	1.73	19–20 ..	1,126	8,573	7.61
3–4 ..	10,704	21,850	2.04	20–21 ..	963	7,767	8.06
4–5 ..	9,538	23,027	2.41	21–22 ..	726	6,264	8.63
5–6 ..	8,420	23,013	2.73	22–23 ..	496	4,561	9.20
6–7 ..	7,968	24,394	3.06	23–24 ..	384	3,558	9.27
7–8 ..	7,495	25,756	3.44	24–25 ..	220	2,092	9.51
8–9 ..	5,834	21,746	3.73	25–26 ..	171	1,746	10.21
9–10 ..	4,225	17,189	4.07	26–27 ..	83	875	10.54
10–11 ..	3,767	16,383	4.35	27–28 ..	85	863	10.15
11–12 ..	3,668	17,085	4.66	28–29 ..	30	315	10.50
12–13 ..	3,560	17,589	4.94	29–30 ..	9	106	11.78
13–14 ..	3,202	17,313	5.41	30–31 ..	4	49	12.25
14–15 ..	2,747	15,770	5.74	31–32 ..	1	6	6.00
15–16 ..	2,475	15,043	6.08				
16–17 ..	2,074	13,624	6.57	Total ..	125,971	381,718	3.03

(iii) *Ages of Mothers and Issue.* The ages of mothers, issue, and average family are given in the attached table, which shows that the average family increased fairly regularly to a maximum of 7.77 children in the age-group 45 years and over, and that the greatest number of mothers occurs in the group 25 to 29 years.

AGES AND ISSUE OF MOTHERS.—AUSTRALIA, 1927.

Ages of Mothers.	Total Mothers.	Total Issue.	Average Number of Children.	Ages of Mothers.	Total Mothers.	Total Issue.	Average Number of Children.
Under 20 years	6,315	7,585	1.20	40–44 years ..	6,612	41,799	6.32
20–24 years ..	28,914	49,336	1.71	45 yrs. and over	583	4,531	7.77
25–29 ,, ..	35,842	88,816	2.48				
30–34 ,, ..	28,843	99,908	3.46				
35–39 ,, ..	18,862	89,743	4.76	All ages ..	125,971	381,718	3.03

(iv) *Previous Issue of Mothers, Various Ages.* The previous issue, according to the age of the mother, is given in the following table.

PREVIOUS ISSUE OF MOTHERS OF VARIOUS AGES.—AUSTRALIA, 1927.

Previous Issue.	Mothers' Ages.							
	Under 20 Years.	20–24 Years.	25–29 Years.	30–34 Years.	35–39 Years.	40–44 Years.	45 Years and Over.	Total.
0	5,203	15,311	10,872	4,789	1,770	354	22	38,321
1	995	8,675	10,127	6,116	2,448	464	24	28,849
2	110	3,574	7,056	5,662	2,791	604	32	19,829
3	6	1,091	4,459	4,582	2,741	669	46	13,594
4	1	223	2,143	3,146	2,407	783	45	8,748
5	..	33	812	2,172	1,989	737	48	5,791
6	..	6	274	1,299	1,699	689	54	4,021
7	..	1	77	626	1,258	640	55	2,657
8	..	..	16	266	822	520	60	1,684
9	..	..	6	120	517	447	57	1,147
10	..	..	..	40	233	312	63	648
11	..	..	..	21	116	182	30	349
12	..	..	..	3	37	118	17	175
13	..	..	..	1	21	53	8	83
14	..	..	..	..	9	30	9	48
15	..	..	..	..	3	6	7	16
16	..	..	..	..	..	3	5	8
17	..	..	..	..	1	..	1	2
19	..	..	..	..	..	1	..	1
Total Mothers	6,315	28,914	35,842	28,843	18,862	6,612	583	125,971

(v) *Previous Issue of Mothers of Twins and Triplets.* Figures regarding the previous issue of mothers of twins and triplets show that 327 mothers had twins at their first confinement; 282 at their second; 208 at their third; 185 at their fourth;

121 at their fifth; 92 at their sixth; 64 at their seventh; 37 at their eighth; 34 at their ninth; 24 at their tenth; 9 at their eleventh; 5 at their twelfth; and 1 at her thirteenth.

Of the 17 cases of triplets registered during 1927, 2 were first confinements, 5 were second, 4 third, 1 fourth, 3 fifth, and 1 each at the eighth and ninth.

11. Interval between Marriage and First Birth.—(i) *Interval and Sex of Children.* The following table shows the interval between marriage and first birth, distinguishing the sexes of the children. Twins and triplets are included, the eldest born only being enumerated:—

INTERVAL BETWEEN MARRIAGE AND FIRST BIRTH.—AUSTRALIA, 1927.

Interval.	Number of First Children.			Interval.	Number of First Children.		
	Males.	Females.	Total.		Males.	Females.	Total.
Under 1 month	190	186	376	2 years ..	1,806	1,698	3,504
1 month ..	256	239	495	3 ,, ..	879	901	1,780
2 months ..	382	352	734	4 ,, ..	510	491	1,001
3 ,, ..	548	471	1,019	5 ,, ..	328	299	627
4 ,, ..	685	662	1,347	6 ,, ..	208	212	420
5 ,, ..	1,008	963	1,971	7 ,, ..	140	132	272
6 ,, ..	1,268	1,243	2,511	8 ,, ..	100	78	178
7 ,, ..	1,184	1,148	2,332	9 ,, ..	70	48	118
8 ,, ..	702	592	1,294	10 ,, ..	37	38	75
9 ,, ..	1,701	1,554	3,255	11 ,, ..	38	35	73
10 ,, ..	1,387	1,308	2,695	12 ,, ..	32	24	56
11 ,, ..	1,128	1,015	2,143	13 ,, ..	15	13	28
12 ,, ..	845	864	1,709	14 ,, ..	12	3	15
13 ,, ..	728	662	1,390	15 ,, ..	5	7	12
14 ,, ..	616	504	1,120	16 ,, ..	6	9	15
15 ,, ..	531	494	1,025	17 ,, ..	3	4	7
16 ,, ..	465	470	935	18 ,, ..	2	4	6
17 ,, ..	395	352	747	19 ,, ..	1	1	2
18 ,, ..	313	330	643	20 ,, ..	1	4	5
19 ,, ..	259	263	522	21 ,, ..	..	1	1
20 ,, ..	243	219	462	23 ,, ..	1	2	3
21 ,, ..	288	256	544	24 ,, ..	..	1	1
22 ,, ..	241	194	435				
23 ,, ..	212	206	418	Total ..	19,769	18,552	38,321

The masculinity of first births was 3.18 as compared with 3.04 for total births.

(ii) *Ages of Mothers and Interval.* The previous issue of mothers of ex-nuptial children is not recorded, but for the purposes of the following table all ex-nuptial births have been assumed to be first births. The table shows the ages of mothers in the cases of ex-nuptial first births, of nuptial first births occurring less than nine months after marriage, and of nuptial first births occurring nine months or more after marriage. A comparison of the combined total of the first two columns with the total of nuptial children born nine months or more after marriage shows that for all ages the ratio was about 2 to 3. At all ages up to and including 21, however, there was a great preponderance of ex-nuptial births and of births following on ante-nuptial conception. It must, of course, be understood that a certain number of premature births is necessarily included among the births which occurred less than nine months after marriage, but information in connexion therewith is not available.

AGES OF MOTHERS AND INTERVAL BETWEEN MARRIAGE AND FIRST BIRTH, ETC.—AUSTRALIA, 1927.

Age of Mother at Birth of Child.	Ex-nuptial Births.	Nuptial Births less than nine months after Marriage.	Total of two preceding columns.	Nuptial First Births nine months after Marriage, and later.	Total Nuptial First Births.	Nuptial First Births and Ex-nuptial Births.
13 years ..	5	1	6	..	1	6
14 ,, ..	21	3	24	..	3	24
15 ,, ..	88	39	127	5	44	132
16 ,, ..	198	224	422	26	250	448
17 ,, ..	411	725	1,136	148	873	1,284
18 ,, ..	573	1,253	1,826	390	1,643	2,216
19 ,, ..	591	1,552	2,143	837	2,389	2,980
20 ,, ..	553	1,519	2,072	1,188	2,707	3,260
21 ,, ..	494	1,498	1,992	1,646	3,144	3,638
22 ,, ..	419	1,194	1,613	2,079	3,273	3,692
23 ,, ..	364	896	1,260	2,357	3,253	3,617
24 ,, ..	267	718	985	2,216	2,934	3,201
25 ,, ..	248	480	728	2,255	2,735	2,983
26 ,, ..	225	467	692	2,131	2,598	2,823
27 ,, ..	172	335	507	1,923	2,258	2,430
28 ,, ..	183	254	437	1,525	1,779	1,962
29 ,, ..	163	157	320	1,345	1,502	1,665
30 ,, ..	153	141	294	1,232	1,373	1,526
31 ,, ..	95	123	218	926	1,049	1,144
32 ,, ..	116	91	207	852	943	1,059
33 ,, ..	119	87	206	691	778	897
34 ,, ..	106	77	183	569	646	752
35 ,, ..	101	49	150	467	516	617
36 ,, ..	98	46	144	344	390	488
37 ,, ..	92	37	129	294	331	423
38 ,, ..	92	33	125	268	301	393
39 ,, ..	83	30	113	202	232	315
40 ,, ..	47	15	62	121	136	183
41 ,, ..	47	7	54	76	83	130
42 ,, ..	32	11	43	56	67	99
43 ,, ..	25	8	33	44	52	77
44 ,, ..	15	4	19	12	16	31
45 ,, ..	5	2	7	9	11	16
46 ,, ..	5	1	6	6	7	12
47 ,, ..	1	..	1	1	1	2
48 ,, ..	2	..	2	..	..	2
49 ,, ..	..	2	2	1	3	3
Unspecified ..	8	..	8	..	..	8
Total ..	6,217	12,079	18,296	26,242	38,321	44,538

12. **Interval between Birth and Registration of Birth.**—Information was obtained for the years 1911 to 1921 regarding the period which elapsed between birth and registration. A detailed table giving the results for 1921 is contained in Demography Bulletin No. 39, issued by this Bureau. The law relating to maternity allowances has tended to accelerate the registration of births; and during the year under review it was found that approximately 35 per cent. were registered in the first week.

Since the granting of the maternity allowance the weighted average interval between the dates of birth and registration has been found to be about 13 days both for nuptial and ex-nuptial children.

§ 2. Marriages.

1. **Marriages, 1923 to 1927.**—The number of marriages registered in Australia during 1927 was 49,033, giving a rate of 7.95 per 1,000 of the mean population for the year. The numbers for the years 1923 to 1927 are given hereunder :—

MARRIAGES, 1923 TO 1927.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Fed. Cap. Terr.	Australia.
1923 ..	17,523	13,126	5,814	4,099	2,376	1,592	7	4	44,541
1924 ..	18,072	13,296	6,234	4,121	2,596	1,529	17	4	45,869
1925 ..	18,522	13,370	6,471	4,255	2,746	1,504	20	11	46,899
1926 ..	19,219	13,405	6,428	4,503	2,844	1,435	14	17	47,865
1927 ..	20,052	13,608	6,277	4,501	3,108	1,432	26	29	49,033

2. **Marriage Rates, 1923 to 1927.**—The number of marriages registered per 1,000 of mean population is given in the following table for the same period :—

CRUDE MARRIAGE RATES (*a*), 1923 TO 1927.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Fed. Cap. Terr.	Australia.
1923 ..	8.00	8.16	7.24	7.29	6.82	7.39	1.94	1.21	7.83
1924 ..	8.11	8.10	7.55	7.78	7.22	7.12	4.72	1.04	7.90
1925 ..	8.14	8.00	7.60	7.82	7.46	7.05	5.43	2.33	7.91
1926 ..	8.28	7.90	7.34	8.06	7.58	6.79	3.72	2.78	7.92
1927 ..	8.45	7.88	7.04	7.88	8.07	6.82	6.14	3.95	7.95

(*a*) Number of marriages (not persons married) per 1,000 of mean annual population.

As in some international tabulations the marriage rates are calculated per 1,000 of the unmarried population of 15 years and over, the corresponding rates have been worked out for Australia for the last four Census periods for which the particulars are available. The figures comprise in each case the Census year with the year immediately preceding and the year immediately following, and are as follows :—Years 1880–82, 48.98 ; years 1890–92, 45.74 ; years 1900–02, 42.14 ; years 1910–12, 50.44 ; and years 1920–22, 56.02. These rates refer, of course, to persons married and not to marriages, as is the case in the preceding table.

3. **Marriage Rates in Various Countries.**—The following table shows the marriage rate for Australia in comparison with various other countries :—

CRUDE MARRIAGE RATES (a).—VARIOUS COUNTRIES.

Country.	Year.	Crude Marriage Rate.	Country.	Year.	Crude Marriage Rate.
Soviet Republics	1924	10.9	Italy	1927	7.4
United States (b) ..	1925	10.2	Canada (including Quebec) ..	1927	7.3
Rumania	1926	9.4	Austria	1927	7.3
Belgium	1926	9.2	Spain	1927	7.2
Czecho-Slovakia ..	1927	9.0	Switzerland ..	1927	7.2
Hungary	1927	8.9	Quebec (Canada) ..	1927	7.1
Union of South Africa(c)	1926	8.9	Bulgaria	1927	7.1
New South Wales ..	1927	8.5	Queensland ..	1927	7.0
Germany	1927	8.5	Great Britain and Northern Ireland ..	1926	7.0
Chile	1927	8.3	Tasmania	1927	6.8
France	1927	8.3	Scotland	1927	6.7
Western Australia ..	1927	8.1	Finland	1926	6.4
Australia	**1927**	**8.0**	Sweden	1927	6.4
Japan	1927	8.0	Ceylon	1927	6.3
South Australia ..	1927	7.9	Norway	1927	5.7
Victoria	1927	7.9	Northern Ireland ..	1927	5.7
England and Wales ..	1927	7.9	Uruguay	1926	5.6
Prussia	1926	7.8	Irish Free State ..	1927	4.5
Ontario (Canada) ..	1927	7.7	Jamaica	1924	3.5
New Zealand ..	1927	7.6			
Denmark	1927	7.6			
Netherlands	1927	7.5			

(a) Number of marriages per 1,000 of mean population.
(b) Registration area includes about 87 per cent of total population.
(c) White population only.

4. **Age and Conjugal Condition at Marriage.**—(i) *General.* The ages at marriage of bridegrooms and brides will be found in "Australian Demography," Bulletin No. 45. A summary in age groups is given in the table hereunder, which also shows the previous conjugal condition of the contracting parties. There were 2,665 males who were less than twenty-one years of age married during 1927, while the corresponding number of females was 11,259. At the other extreme there were 47 men of sixty-five years and upwards, who described themselves as bachelors, and 5 spinsters of corresponding age.

AGES AND CONJUGAL CONDITION OF PERSONS MARRIED.—AUSTRALIA, 1927.

Age at Marriage.	Bridegrooms.				Brides.			
	Bachelors.	Widowers.	Divorced.	Total.	Spinsters.	Widows.	Divorced.	Total.
Under 20	1,291	..	..	1,291	7,910	4	1	7,915
20–24 years	15,888	16	10	15,914	20,831	65	47	20,943
25–29 ,,	16,200	158	67	16,425	10,707	234	184	11,125
30–34 ,,	6,500	328	159	6,987	3,649	367	254	4,270
25–39 ,,	2,996	491	217	3,704	1,615	429	190	2,234
40–44 ,,	1,295	436	177	1,908	616	362	136	1,114
45–49 ,,	613	386	99	1,098	291	334	58	683
50–54 ,,	272	304	57	633	105	198	20	323
55–59 ,,	162	275	14	451	51	144	9	204
60–64 ,,	84	230	10	324	25	94	8	127
65 years and over ..	47	241	9	297	5	85	2	92
Unspecified	1	..	..	1	2	1	..	3
Total	45,349	2,865	819	49,033	45,807	2,317	909	49,033

(ii) *Relative Ages, Bridegrooms and Brides.* The relative ages of bridegrooms and brides are shown for single years in "Australian Demography," Bulletin No. 45: a condensation into age-groups of five years is given below :—

RELATIVE AGES OF PERSONS MARRIED.—AUSTRALIA, 1927.

Ages.		Total Bride-grooms.	Ages of Brides.								
			Under 15.	15 to 19.	20 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 and upwards.	Not stated.
Ages of Bridegrooms.	Under 20 ..	1,291	2	956	316	16	..	1	..	..	..
	20 to 24 ..	15,914	10	4,743	9,315	1,626	167	32	11	10	..
	25 to 29 ..	16,425	1	1,664	8,253	5,312	975	178	32	10	..
	30 to 34 ..	6,987	1	367	2,144	2,539	1,390	422	93	31	..
	35 to 39 ..	3,704	1	114	616	1,078	959	673	192	71	..
	40 to 44 ..	1,908	..	35	210	371	439	430	288	134	1
	45 to 49 ..	1,098	..	10	53	115	195	247	230	247	1
	50 to 54 ..	633	..	9	23	35	76	126	127	237	..
	55 to 59 ..	451	..	1	9	20	43	69	81	228	..
	60 to 64 ..	324	..	..	3	6	17	43	33	222	..
	65 and upwards	297	..	1	1	7	9	13	27	239	..
	Not stated ..	1	..	..	..	..	..	..	..	..	1
Total Brides ..		49,033	15	7,900	20,943	11,125	4,270	2,234	1,114	1,429	3

(iii) *Average Ages, Bridegrooms and Brides.* The age at marriage of brides has declined slightly during recent years to an average of about 25 years. The figures for the five years are :—1923, 25.61 years; 1924, 25.46 years; 1925, 25.45 years; 1926, 25.34; and 1927, 25.22. For the five years 1907–11 the average age was 25.70 years, compared with 25.92 years for the five years 1912–16, 26.07 years for the five years 1917–21, and 25.42 years for the five years 1923–1927. The average age of bridegrooms in 1923 was 29.12 years; in 1924, 28.99 years; in 1925, 28.94 years; in 1926, 28.82 years; and in 1927, 28.69. It follows, therefore, that brides are generally speaking rather less than three and one-half years younger than bridegrooms.

5. **Previous Conjugal Condition.**—The number of bachelors and spinsters, widowed and divorced persons, who were married during the year 1927 has already been given. The following table shows the conjugal condition of the contracting parties :—

PREVIOUS CONJUGAL CONDITION OF PERSONS MARRIED.—AUSTRALIA, 1927.

Conjugal Condition.		Total Bridegrooms.	Brides.		
			Spinsters.	Widows.	Divorced.
Bridegrooms	Bachelors ..	45,349	43,343	1,363	643
	Widowers ..	2,865	1,858	848	159
	Divorced ..	819	606	106	107
Total Brides ..		49,033	45,807	2,317	909

6. **Birthplaces of Persons Married.**—The following table shows the birthplaces of persons who were married in 1927. In "Australian Demography," Bulletin No. 45 the relative birthplaces of bridegrooms and brides will be found tabulated in full detail.

BIRTHPLACES OF PERSONS MARRIED.—AUSTRALIA, 1927.

Birthplaces.	Bridegrooms.	Brides.
AUSTRALASIA—		
New South Wales ..	15,602	16,742
Victoria	11,799	12,261
Queensland ..	4,937	5,346
South Australia ..	3,922	3,919
Western Australia ..	1,863	2,278
Tasmania	1,933	2,015
Northern Territory ..	12	20
Federal Capital Territory	9	11
New Zealand ..	490	409
EUROPE—		
England and Wales..	5,199	3,823
Scotland	1,415	1,104
Ireland	510	344
Other British Possessions in Europe ..	56	32
Belgium	6	5
Denmark	45	9
Finland	15	3
France	26	18
Germany	111	62
Greece	85	55
Italy	195	128
Netherlands ..	24	12
Norway	37	3
Russia	61	34
Spain	15	7
Sweden	53	8
Switzerland ..	24	13
Other Countries in Europe	82	56
ASIA—		
British India and Ceylon ..	62	36
China	22	5
Japan	6	1
Syria	32	25
Other Countries in Asia	32	20
AFRICA—		
Union of South Africa	111	92
Other African Countries	13	12
AMERICA—		
Canada	63	26
United States ..	98	36
Other American Countries ..	20	17
POLYNESIA		
Fiji	13	3
Other Polynesian Islands	19	23
At Sea	9	10
Unspecified.. ..	7	10
Total	49,033	49,033

7. **Occupations and Ages of Bridegrooms.**—A tabulation has been made of the occupations and ages of all males married in Australia, and the results for 1927 are published in detail in "Australian Demography," Bulletin No. 45. An abridgment of this tabulation is given below. The average ages of the persons falling under the twenty-eight subdivisions were determined, and it appears that, apart from the "Indefinite class," which consists chiefly of persons who have retired from business and who are living on income from investments, and who may be expected to have reached a comparatively high age before attaining a position of financial independence, the average age ranges from 26.99 years for those employed on Roads and Tramways, to 31.43 years in the class engaged in pastoral pursuits. On the experience of 1927, the average ages at marriage of bridegrooms in the larger classes of occupations were as follows :—Professional, 29.7 years ; Domestic, 30.2 years ; Commercial, 29.0 years ; Transport, 27.9 years ; Industrial, 27.9 years ; and Primary Producers, 30.1 years.

OCCUPATIONS AND AGES OF BRIDEGROOMS.—AUSTRALIA, 1927.

Ages at Marriage.	Professional.		Domestic.		Commercial.							Transport and Communication.			
	Government, Defence, and Law.	Others.	Board and Lodging.	Others.	Property and Finance.	Art, Mechanic, and Textile Products.	Food and Drinks.	Animal and Vegetable Substances.	Fuel, Light and Metals.	Merchants and Dealers.	Others.	Railways.	Roads and Trams.	Sea and Rivers.	Others.
15 years ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
16 ,, ..	..	1	..	..	..	..	1	..	..	..	..	..	1	..	..
17 ,, ..	1	1	..	2	..	..	4	..	..	1	3	2	12	..	1
18 ,, ..	1	5	2	15	1	1	19	1	..	4	9	10	32	3	5
19 ,, ..	2	11	6	17	1	4	43	1	1	9	53	27	65	6	8
20 ,, ..	7	18	2	23	2	6	49	..	2	15	96	52	102	25	13
21 ,, ..	36	57	24	31	17	18	117	7	3	53	207	103	253	28	42
22 ,, ..	50	78	34	32	23	31	146	10	10	54	228	140	260	34	40
23 ,, ..	79	159	24	32	52	27	139	4	4	74	328	148	255	48	49
24 ,, ..	95	164	32	33	48	34	129	13	5	60	417	136	242	49	58
25 ,, ..	115	195	39	26	65	38	125	12	4	95	467	128	284	57	58
26 ,, ..	109	206	41	24	69	43	133	14	6	103	481	133	234	68	64
27 ,, ..	109	161	38	20	78	37	115	10	5	75	335	124	203	55	74
28 ,, ..	74	146	20	27	52	22	89	14	6	60	316	87	133	41	52
29 ,, ..	69	111	22	10	37	20	63	8	6	49	249	65	109	38	41
30 ,, ..	57	70	20	19	30	28	41	5	6	68	185	58	94	42	26
31 ,, ..	47	59	16	10	31	16	43	3	2	40	185	53	80	34	40
32 ,, ..	29	55	16	14	22	17	48	3	4	31	154	37	68	20	21
33 ,, ..	25	50	16	15	14	10	39	10	2	27	112	45	63	25	19
34 ,, ..	22	51	11	11	13	13	33	2	..	31	103	41	63	27	16
35 to 39 ..	89	162	58	32	56	38	101	12	4	116	349	88	161	95	41
40 ,, 44 ..	43	86	35	25	26	19	58	7	7	53	158	61	73	44	18
45 ,, 49 ..	20	39	15	9	22	15	35	3	1	46	87	25	39	27	9
50 and over	46	90	27	31	35	19	43	8	3	68	100	46	46	39	7
Not stated	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total ..	1,125	1,975	498	458	694	456	1,613	147	81	1,132	4,622	1,609	2,872	805	702
Average age—year 1927	29.55	29.76	30.94	29.41	30.30	29.89	27.89	30.22	29.42	30.91	28.56	28.02	26.99	30.78	27.79

Ages at Marriage.	Manufacturing.								Primary Producers.				
	Art and Mechanic Productions.	Textiles and Fibrous Materials.	Food and Drinks.	Animal and Vegetable Substances.	Metals and Minerals.	Fuel, Light, and Energy.	Building and Construction.	Others.	Agricultural.	Pastoral.	Mining and Quarrying.	Others.	Indefinite.
15 years ..	..	..	..	..	1	..	..	..	..	..	..	..	..
16 ,, ..	1	..	..	..	2	..	..	4	..	..	..	..	..
17 ,, ..	7	1	4	..	2	..	7	26	3	..	1	..	..
18 ,, ..	30	5	11	3	17	1	23	105	16	2	15	2	..
19 ,, ..	65	19	25	9	40	12	59	282	52	10	32	5	..
20 ,, ..	120	36	30	14	55	7	105	434	87	19	43	12	..
21 ,, ..	275	56	79	30	127	40	218	892	240	77	91	45	..
22 ,, ..	307	63	86	17	111	50	274	972	302	81	83	22	..
23 ,, ..	329	75	88	16	119	68	243	951	397	93	92	36	..
24 ,, ..	309	76	62	21	115	73	237	916	377	99	74	32	1
25 ,, ..	319	62	69	13	107	70	193	862	437	106	78	20	2
26 ,, ..	285	63	62	18	116	46	193	825	433	118	55	18	2
27 ,, ..	254	52	61	22	74	53	191	709	414	116	67	35	..
28 ,, ..	167	36	39	16	71	33	153	566	316	85	56	18	3
29 ,, ..	141	21	28	9	49	36	140	482	311	70	33	13	2
30 ,, ..	121	21	25	17	40	22	109	364	269	82	35	15	..
31 ,, ..	102	22	22	9	36	19	99	292	223	68	17	18	1
32 ,, ..	77	23	21	6	41	14	85	261	209	64	18	10	3
33 ,, ..	60	14	16	7	26	13	54	210	193	41	10	6	2
34 ,, ..	58	22	17	4	24	9	47	193	154	47	11	10	3
35 to 39 ..	225	58	60	17	90	40	220	739	596	170	54	25	8
40 ,, 44 ..	103	28	27	8	38	12	134	390	310	98	32	9	6
45 ,, 49 ..	58	19	11	4	25	3	68	263	151	68	19	10	7
50 and over	78	31	18	4	47	10	114	355	236	101	34	13	56
Not stated	..	..	..	..	..	..	..	..	1	..	..	..	..
Total ..	3,491	803	861	264	1,373	631	2,966	11,093	5,727	1,615	950	374	96
Average age—year 1927	27.46	28.35	27.18	27.30	27.72	27.13	28.63	28.00	30.23	31.43	27.52	28.28	48.88

8. Fertility of Marriages.—The quotient obtained by division of the nuptial births registered, e.g., during the five years 1923 to 1927, by the number of marriages registered during the five years 1918 to 1922, i.e., the period antecedent by five years to the period of the births, has been called the "fertility of marriages." The quotient for this period is 2.79—in other words, the number of children to be expected from every marriage in Australia is about three. This method, while not absolutely accurate, generally furnishes results which agree fairly well with those found by more elaborate and careful investigation. For the following five-yearly periods the results were :—1916–20, 2.90 ; 1917–21, 2.91 ; 1918–22, 3.07 ; 1919–23, 3.25 ; 1920–24, 3.36 ; 1921–25, 3.25; 1922–26, 3.14 ; and 1923–27, 2.79.

9. Registration of Marriages.—(i) *Marriages in each Denomination.* In all the States marriages may be celebrated either by ministers of religion whose names are registered for that purpose with the Registrar-General, or by certain civil officers—in most cases district registrars. Most of the marriages are celebrated by ministers of religion. The proportions so celebrated in 1927 were :—New South Wales, 93.77 per cent. ; Victoria, 93.79 per cent. ; Queensland, 95.81 per cent. ; South Australia, 94.51 per cent. ; Western Australia, 81.47 per cent. ; and Tasmania, 95.01 per cent., the percentage for Australia being 93.36. The registered ministers in 1927 belong to more than forty different denominations, some of which, however, can hardly be regarded as having any valid existence. A number of these have been omitted from the tabulation and are bracketed under the heading "Other Christian." The figures for 1927 are shown in the following table :—

MARRIAGES IN EACH DENOMINATION.—AUSTRALIA, 1927.

Denomination.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
Church of England ..	8,484	3,915	1,968	1,142	1,113	576	8	24	17,230
Roman Catholic ..	4,312	2,580	1,427	566	501	218	6	..	9,610
Methodist	2,191	1,999	988	1,379	412	250	6	5	7,230
Presbyterian ..	2,707	2,514	939	230	241	114	..	..	6,745
Congregational ..	477	555	110	236	100	54	..	..	1,532
Baptist	299	583	167	197	55	59	..	..	1,360
Church of Christ ..	64	325	31	261	54	59	..	..	794
Lutheran	46	65	145	180	6	..	..	..	442
Greek Catholic ..	33	9	8	2	6	..	..	..	58
Unitarian	1	11	..	4	..	..	..	..	16
Salvation Army ..	66	76	52	28	15	6	..	..	243
Seventh-Day Adventist	30	16	7	9	5	2	..	..	69
Other Christian ..	42	56	167	17	11	22	..	..	315
Hebrew	51	59	5	3	13	1	..	..	132
Registrar's Office ..	1,249	845	263	247	576	71	6	..	3,257
Total	20,052	13,608	6,277	4,501	3,108	1,432	26	29	49,033

(ii) *Number and Percentage in each Denomination, 1923 to 1927.* The number of marriages according to denomination, and the percentages on total marriages, are shown in the next table :—

MARRIAGES IN EACH DENOMINATION.—AUSTRALIA, 1923 TO 1927.

Denomination.		1923.	1924.	1925.	1926.	1927.
Church of England ..	Total	15,783	16,229	16,361	16,776	17,230
	%	35.43	35.38	34.89	35.05	35.14
Roman Catholic ..	Total	8,240	8,714	8,911	9,223	9,610
	%	18.50	19.00	19.00	19.27	19.60
Methodist	Total	6,965	6,919	7,104	7,001	7,230
	%	15.64	15.09	15.15	14.63	14.74
Presbyterian	Total	6,268	6,391	6,612	6,566	6,745
	%	14.07	13.93	14.10	13.72	13.76
Congregational ..	Total	1,694	1,697	1,741	1,816	1,532
	%	3.80	3.70	3.71	3.79	3.12
Baptist	Total	1,342	1,327	1,383	1,331	1,360
	%	3.01	2.89	2.95	2.78	2.77
Church of Christ ..	Total	720	740	770	792	794
	%	1.62	1.61	1.64	1.65	1.62
Lutheran	Total	390	405	415	440	442
	%	0.88	0.88	0.88	0.92	0.92
Greek Catholic ..	Total	47	59	44	59	58
	%	0.11	0.13	0.09	0.12	0.12
Unitarian	Total	17	19	95	204	16
	%	0.04	0.04	0.20	0.43	0.03
Salvation Army ..	Total	225	237	271	254	243
	%	0.51	0.52	0.58	0.53	0.49
Seventh-Day Adventist	Total	60	67	108	77	69
	%	0.13	0.15	0.23	0.16	0.14
Other Christian ..	Total	424	321	294	272	315
	%	0.95	0.70	0.63	0.57	0.64
Hebrew	Total	100	130	97	120	132
	%	0.22	0.28	0.21	0.25	0.27
Registrar's Office ..	Total	2,263	2,614	2,693	2,934	3,257
	%	5.08	5.70	5.74	6.13	6.64
Unspecified	Total	3	..	..	..	..
	%	0.01	..	..	..	..
Total ..	..	44,541	45,869	46,899	47,865	49,033

§ 3. Deaths.

1. **Male and Female Deaths, 1923 to 1927.**—The two following tables show the number of deaths registered in each year from 1923 to 1927 inclusive. The annual average of male deaths during the period was 31,821, and of female deaths 24,383, the details being as follow :—

MALE DEATHS, 1923 TO 1927.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Fed. Cap. Terr.	Australia.
1923 ..	11,969	9,135	4,699	2,727	1,907	1,140	35	10	31,622
1924 ..	11,887	8,863	4,440	2,644	2,039	1,177	42	11	31,103
1925 ..	11,944	8,582	4,581	2,729	2,157	1,081	51	9	31,134
1926 ..	12,670	8,765	5,022	2,676	2,131	1,040	57	26	32,387
1927 ..	12,967	8,982	4,846	2,773	2,115	1,074	69	32	32,858
Rate (*a*), 1927	10.72	10.44	10.29	9.38	10.21	10.31	22.65	7.01	10.41

(*a*) Number of deaths per 1,000 of mean male population.

FEMALE DEATHS, 1923 TO 1927.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Fed. Cap. Terr.	Australia.
1923 ..	9,079	8,084	3,194	2,234	1,023	997	3	..	24,614
1924 ..	8,948	7,640	2,887	2,226	1,224	946	2	4	23,877
1925 ..	8,878	7,255	2,964	2,250	1,158	915	11	3	23,434
1926 ..	9.489	7,570	3,192	2,201	1,219	872	7	15	24,565
1927 ..	9,782	7,791	3,232	2,355	1,278	959	7	20	25,424
Rate (a), 1927	8.41	8.98	7.68	8.55	7.18	9.06	5.90	7.20	8.43

(a) Number of deaths per 1,000 of mean female population.

2. **Male and Female Death Rates, 1927.**—The crude male and female death rates given in the last lines of the preceding tables relate to the year 1927 only. New South Wales had the highest and South Australia the lowest rate for males, and for the females Tasmania had the highest and Western Australia the lowest rate. The rates for the two Territories are based on very small numbers, and comparisons with the States would be misleading.

Owing to differences in age constitution in the six States, the crude rates are not, however, strictly comparable. A more satisfactory rate is furnished by the "Index of Mortality" (see sub-para. 5). The death rates for males and females in each State in five-year age groups for the three years 1920 to 1922, that is, for the Census year and for the year immediately preceding and following, are shown in sub-section 9 hereafter.

The rates for the five years 1923 to 1927 averaged 10.5 per 1,000 for males, and 8.4 per 1,000 for females.

MALE AND FEMALE DEATH RATES (a).—AUSTRALIA, 1923 TO 1927.

Year.	1923.	1924.	1925.	1926.	1927.
Male rate	10.91	10.50	10.28	10.48	10.41
Female rate	8.82	8.39	8.07	8.30	8.43
Crude total rate	9.89	9.47	9.20	9.42	9.45

(a) Number of deaths per 1,000 of mean population.

3. **Total Deaths, 1923 to 1927.**—The total number of deaths during each of the five years 1923 to 1927 is given below :—

TOTAL DEATHS, 1923 TO 1927.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Fed. Cap. Terr.	Australia.
1923 ..	21,048	17,219	7,893	4,961	2,930	2,137	38	10	56,236
1924 ..	20,835	16,503	7,327	4,870	3,263	2,123	44	15	54,980
1925 ..	20,822	15,837	7,545	4,979	3,315	1,996	62	12	54,568
1926 ..	22,159	16,335	8,214	4,877	3,350	1,912	64	41	56,952
1927 ..	22,749	16,773	8,078	5,128	3,393	2,033	76	52	58,282

4. Crude Death Rates, 1923 to 1927.—The crude death rates for the five years 1923 to 1927 are given in the next table.

CRUDE DEATH RATES (*a*), 1923 TO 1927.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Fed. Cap. Terr.	Australia.
1923 ..	9.61	10.71	9.83	9.59	8.41	9.92	10.53	3.02	9.89
1924 ..	9.35	10.05	8.88	9.19	9.08	9.89	12.21	3.90	9.47
1925 ..	9.16	9.47	8.86	9.15	9.00	9.35	16.84	2.54	9.20
1926 ..	9.55	9.63	9.39	8.73	8.93	9.05	17.00	6.71	9.42
1927 ..	9.59	9.71	9.06	8.98	8.81	9.68	17.95	7.08	9.45

(*a*) Number of deaths per 1,000 of annual mean population.

5. Index of Mortality.—(i) *General.*—The death rates so far quoted are crude rates, *i.e.*, they simply show the number of deaths per thousand of mean population, without taking the age constitution into consideration. Other conditions being equal, however, the death rate of a country will be lower if it contains a large percentage of young people (not infants). In order to obtain a comparison of the mortality of various countries on a uniform basis so far as sex and age constitution is concerned, the standard population compiled by the International Institute of Statistics, according to age distribution (eleven age-groups) of the population of nineteen European countries at their censuses nearest to the year 1900 is used in the computation of the "Index of Mortality" as distinguished from the crude death rate.

(ii) *Sex and Age-Groups.* The distribution per 10,000 according to sex and age in the eleven age-groups used in computation of the "Index of Mortality" is given in the following table :—

Age Group.	Males.	Females.
Under 1 year	132	130
1 to 4 years	469	467
5 ,, 14 ,, ...	1,037	1,032
15 ,, 24 ,, ...	905	927
25 ,, 34 ,, ...	725	755
35 ,, 44 ,, ...	593	613
45 ,, 54 ,, ...	454	485
55 ,, 64 ,, ...	337	371
65 ,, 74 ,, ...	187	218
75 ,, 84 ,, ...	64	81
85 years and over	7	11
Total	4,910	5,090

In computing an index the death rate is ascertained for each age-group for each sex and multiplied by the corresponding number in the above table, and the sum of the products so obtained is divided by 10,000. The result represents the "Index of Mortality."

(iii) *Comparison of Rates.* For the year 1927 on the basis of the crude rates there is a range of 0.90 per 1,000 persons between the lowest rate in Western Australia (8.81) and the highest rate in Victoria (9.71), whereas the standardized rates increase the range to

1.41 per 1,000, i.e., between 9.30 in South Australia and 10.71 in Western Australia. In its application to the figures for 1927 the process of adjustment altered the relative positions of all States with the exception of Queensland from those determined by the crude rates. The principal changes were that Western Australia from first place fell to the lowest position to the advantage of Victoria which was raised from the lowest position on the basis of crude rates to the second position on the standard basis.

(iv) *Years 1923 to 1927.* For purposes of comparison with previous years the index of mortality, based on the method alluded to in (ii) *ante*, is shown in the following table for each of the five years 1923 to 1927 :—

INDEX OF MORTALITY, 1923 TO 1927.

Year.	States.						Territories.		Australia.
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Northern.	Federal Capital.	
1923 ..	10.61	10.97	10.97	9.90	9.79	10.49	7.37	2.60	10.64
1924 ..	10.31	10.31	9.90	9.50	10.82	10.43	9.56	4.43	10.20
1925 ..	10.13	9.74	9.94	9.43	10.67	9.94	15.52	2.58	9.93
1926 ..	10.62	9.91	10.47	9.02	10.63	9.70	14.81	7.83	10.20
1927 ..	10.64	10.02	10.20	9.30	10.71	10.43	12.58	8.45	10.43

6. Death Rates of Various Countries—The following table gives particulars of the crude death rates of various countries for the latest available years :—

DEATH RATES (*a*).—VARIOUS COUNTRIES.

Country.	Year.	Crude Death Rate.	Country.	Year.	Crude Death Rate.
New Zealand ..	1927	8.5	Switzerland ..	1927	12.3
Western Australia ..	1927	8.8	New York State ..	1927	12.3
South Australia ..	1927	9.0	Sweden	1927	12.7
Queensland	1927	9.1	Belgium	1927	13.0
Australia	**1927**	**9.5**	Finland	1926	13.4
Union of South Africa (Whites)	1926	9.6	Scotland	1927	13.5
New South Wales ..	1927	9.6	Quebec (Canada) ..	1927	13.9
Tasmania	1927	9.7	Northern Ireland ..	1927	14.6
Victoria	1927	9.7	Irish Free State ..	1927	14.8
Netherlands ..	1927	10.3	Austria	1927	14.9
Uruguay	1926	10.5	Italy	1927	15.5
Ontario (Canada) ..	1927	10.9	Czecho-Sovakia ..	1927	16.0
Norway	1927	11.0	France	1927	16.5
Canada (including Quebec)	1927	11.1	Bulgaria	1927	17.2
United States (*b*) ..	1927	11.4	Hungary	1927	17.6
Prussia	1926	11.6	Spain	1927	18.9
Denmark	1927	11.6	Japan	1927	19.8
Great Britain and Northern Ireland ..	1926	11.9	Ceylon	1927	21.7
Germany	1927	12.0	Jamaica	1924	21.8
England and Wales ..	1927	12.3	Rumania	1926	22.0
			Soviet Republics ..	1925	22.9
			Chile	1927	27.4
			Egypt	1927	32.0

(*a*) Number of deaths per 1,000 of mean population. (*b*) Registration area includes about 89 per cent. of the population.

7. Infantile Deaths and Death Rate.—(i) *Australia 1923 to 1927.* In the following table, which shows both the total number of deaths of children under one year and the rate per thousand live births since 1923, males and females are distinguished. The universal experience that during the first few years of life the higher death rate of male infants tends to counteract the excess of male births is confirmed by the fact that out of 345,009 male infants born from 1923 to 1927, 21,233 (61.54 per 1,000) died during their first year of life, while of 327,792 female infants only 16,376 (49.96 per 1,000) died during the first year.

INFANTILE DEATHS AND DEATH RATES.—AUSTRALIA, 1923 TO 1927.

Year.	Registered deaths under one year.			Rate of Infantile Mortality (a).		
	Males.	Females.	Total.	Males.	Females.	Total.
1923	4,617	3,567	8,184	66.56	54.16	60.52
1924	4,276	3,425	7,701	62.15	51.79	57.08
1925	4,089	3,162	7,251	58.80	47.73	53.40
1926	4,149	3,041	7,190	60.64	46.97	53.99
1927	4,102	3,181	7,283	59.55	49.08	54.47

(a) Number of deaths under 1 year per 1,000 live births registered.

(ii) *States, 1923 to 1927.* For the States and Territories the rates of infantile mortality during the last five years were as follow :—

INFANTILE MORTALITY RATES (a), 1923 TO 1927.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	North. Terr.	Fed. Cap. Terr.	Australia.
1923 ..	60.68	65.70	53.95	60.30	56.02	57.45	13.89	..	60.52
1924 ..	58.93	61.32	51.30	51.33	49.87	54.99	35.09	48.78	57.08
1925 ..	54.95	56.98	45.21	46.09	56.57	55.19	30.77	106.38	53.40
1926 ..	57.61	55.68	50.65	44.33	49.27	47.61	68.49	53.33	53.99
1927 ..	54.94	56.05	54.45	53.43	45.86	52.97	102.94	168.83	54.47

(a) Number of deaths under 1 year per 1,000 live births registered.

The deaths of infants under one year of age during 1927 numbered 7,283, the mortality rate being 54.47, which is lower than the average for previous four years, though higher than either of the two years immediately preceding. Among the States in 1927, Western Australia had the lowest and Victoria the highest rate.

(iii) *Districts.* The total number of births, of deaths of children under one year of age, and the average rate of infantile mortality for 1927 are shown in the following table for each of the sixty districts for which the vital statistics have been tabulated. To afford a better indication of the geographical position of the districts the name of a town situated in a fairly central part of each district has been added. The figures for the Territories and for Lord Howe Island are included for the sake of completeness, but are too small to be used in comparison with others. Remarkable variations are shown in the mortality rate for the various districts. The lowest rate was experienced in the Upper North District (Port Augusta) of South Australia (21.43 per 1,000 births), and the highest in the Northern District (Broome) of Western Australia (129.03 per 1,000 births).

INFANTILE MORTALITY.—STATE DISTRICTS, 1927.

States and Territories.	Districts.	Towns.	Total Births, 1927.	Total Deaths of Children under one year, 1927.	Average Infantile Mortality per 1,000 Births, 1927.
New South Wales ..	Metropolitan ..	Sydney ..	20,588	1,161	56.39
,, ..	Balance of Cumberland ..	Parramatta ..	4,243	220	51.85
,, ..	North Coast ..	Grafton ..	3,448	176	51.04
,, ..	Hunter and Manning ..	Newcastle ..	6,894	395	57.30
,, ..	South Coast ..	Nowra ..	2,083	104	49.93
,, ..	Northern Tableland ..	Armidale ..	1,342	65	48.44
,, ..	Central Tableland ..	Bathurst ..	3,140	192	61.15
,, ..	Southern Tableland ..	Goulburn ..	1,412	86	60.90
,, ..	North-Western Slope ..	Tamworth ..	1,463	90	61.52
,, ..	Central-Western Slope ..	Dubbo ..	1,680	101	60.12
,, ..	South-Western Slope ..	Temora ..	2,946	125	42.43
,, ..	North-Central Plain ..	Moree ..	700	45	64.28
,, ..	Central Plain ..	Coonamble ..	655	35	53.44
,, ..	Riverina ..	Narrandera ..	1,979	95	48.00
,, ..	Western Division ..	Broken Hill ..	1,266	68	53.71
,, ..	Lord Howe Island ..	—	..	..	..
Victoria	Metropolitan ..	Melbourne ..	17,900	1,118	62.46
,, ...	Central ..	Geelong ..	4,233	226	53.39
,, ...	North-Central ..	Kyneton ..	1,086	49	45.12
,, ...	Western ..	Hamilton ..	3,096	131	42.31
,, ...	Wimmera ..	Horsham ..	1,442	70	48.54
,, ...	Mallee ..	Mildura ..	1,836	99	53.92
,, ...	Northern ..	Bendigo ..	2,959	163	55.09
,, ...	North-Eastern ..	Beechworth ..	868	37	42.63
,, ...	Gippsland ..	Sale ..	1,654	73	44.14
Queensland ..	Metropolitan ..	Brisbane ..	6,372	365	57.28
,, ..	Moreton ..	Ipswich ..	1,907	64	33.56
,, ..	Wide Bay ..	Maryborough	2,491	111	44.56
,, ..	Port Curtis ..	Rockhampton	1,433	131	91.42
,, ..	Edgecumbe ..	Townsville ..	2,005	95	47.38
,, ..	Rockingham ..	Cairns ..	1,478	61	41.27
,, ..	York Peninsula ..	Cooktown ..	186	15	80.64
,, ..	Carpentaria ..	Croydon ..	251	14	55.77
,, ..	Central-Western ..	Winton ..	104	10	96.15
,, ..	South-Western ..	Charleville ..	289	21	72.66
,, ..	Central ..	Blackall ..	558	40	71.68
,, ..	Maranoa ..	Roma ..	308	15	48.70
,, ..	Downs ..	Toowoomba ..	2,451	138	56.30
South Australia ..	Metropolitan ..	Adelaide ..	5,781	370	64.00
,, ..	Central ..	Gawler ..	2,500	98	39.20
,, ..	Lower North ..	Redruth ..	1,601	94	58.71
,, ..	Upper North ..	Port Augusta	560	12	21.43
,, ..	South-Eastern ..	Mount Gambier	506	21	41.50
,, ..	Western ..	Port Lincoln ..	544	19	34.93
Western Australia ..	Metropolitan ..	Perth ..	3,665	210	57.30
,, ..	Northern Agricultural	Geraldton ..	1,504	67	44.54
,, ..	South-Western ..	Katanning ..	2,660	83	31.20
,, ..	Eastern Goldfields ..	Kalgoorlie ..	429	22	51.28
,, ..	Northern Goldfields ..	Pilbara ..	130	3	23.08
,, ..	North-Western ..	Roebourne ..	63	..	..
,, ..	Northern ..	Broome ..	31	4	129.03
Tasmania ..	Metropolitan ..	Hobart ..	1,418	79	55.71
,, ..	Launceston ..	Launceston ..	564	37	65.60
,, ..	North-Eastern ..	Scottsdale ..	528	26	49.24
,, ..	North-Western ..	Stanley ..	1.223	50	40.88
,, ..	Midland ..	Zeehan ..	449	30	66.82
,, ..	South-Eastern ..	Sorell ..	521	29	55.66
,, ..	South-Western ..	Franklin ..	130	5	38.46
Northern Territory	..	Darwin ..	68	7	102.94
Federal Capital Territory	..	Canberra ..	77	13	168.83

(iv) *Various Countries and Cities.* Compared with other countries, the States of Australia occupy a very favourable position, being surpassed by New Zealand and Norway only. Among cities, however, the best of the Australian cities Sydney and Hobart are equal for the eighth place only, whereas New Zealand has three cities amongst the first five on the list presented on the next page. A study of the respective rates shows that a high birth rate is often, though not invariably, accompanied by a high infantile death rate.

INFANTILE MORTALITY RATES (*a*).—VARIOUS COUNTRIES.

Country.	Year.	Rate of Infantile Mortality. (*a*)	Crude Birth Rate. (*b*)	Country.	Year.	Rate of Infantile Mortality. (*a*)	Crude Birth Rate. (*b*)
New Zealand ..	1927	39	20.3	France ..	1927	83	18.1
Western Australia	1927	46	22.0	Denmark ..	1926	84	20.5
Norway ..	1926	48	19.7	Finland ..	1926	86	21.7
South Australia ..	1927	53	20.1	Scotland ..	1927	89	19.8
Tasmania ..	1927	53	23.0	Canada (including Quebec) ..	1927	94	24.6
Queensland ..	1927	54	22.2	Belgium ..	1926	97	19.0
Australia ..	**1927**	**54**	**21.7**	Germany ..	1927	97	18.3
New South Wales	1927	55	22.7	Prussia ..	1926	101	19.6
Victoria ..	1927	56	20.3	Uruguay ..	1925	115	25.4
Switzerland ..	1927	57	17.4	Italy	1925	119	27.8
New York State ..	1927	59	19.9	Austria ..	1926	123	21.4
Netherlands ..	1927	59	23.1	Spain ..	1927	127	28.6
Sweden ..	1927	62	16.1	Quebec (Canada)	1927	129	31.9
United States (Registration Area)	1927	64	20.4	Japan ..	1927	142	33.6
Union of South Africa (Whites)	1926	65	26.2	Czecho-Slovakia	1927	157	23.3
Irish Free State ..	1927	70	20.3	Bulgaria ..	1927	159	24.6
England and Wales	1927	70	16.7	Ceylon ..	1927	160	39.5
Ontario (Canada)	1927	71	21.2	Jamaica ..	1922	177	37.3
Great Britain and Northern Ireland	1926	72	18.3	Hungary ..	1927	185	25.2
Northern Ireland	1927	78	21.3	Egypt ..	1927	221	50.6
				Chile	1926	251	40.1
				Rumania ..	1926	317	35.8

(*a*) Number of deaths under 1 year per 1,000 births registered. (*b*) Number of births per 1,000 of mean population.

INFANTILE MORTALITY RATES (*a*).—VARIOUS CITIES.

City.	Year.	Rate of Infantile Mortality. (*a*)	City.	Year.	Rate of Infantile Mortality. (*a*)
Auckland	1927	38	Antwerp	1927	78
Amsterdam ..	1927	41	Edinburgh	1927	80
Washington ..	1927	41	Manchester ..	1927	82
Dunedin	1927	43	Buenos Aires ..	1926	83
Wellington ..	1927	44	Paris	1927	86
Oslo	1926	48	Munich	1927	87
San Francisco ..	1927	50	Sheffield	1927	89
Hobart	1927	56	Dresden	1927	90
Sydney	1927	56	Liverpool	1927	91
New York City ..	1927	56	Berlin	1927	92
Perth	1927	57	Leipzig	1927	93
Brisbane	1927	57	Cologne	1927	100
Copenhagen ..	1927	58	Belfast	1927	101
London	1927	59	Buda Pest	1927	104
Christchurch ..	1927	59	Aberdeen	1927	105
Stockholm	1927	59	Johannesburg ..	1927	106
Newark	1927	61	Glasgow	1927	107
Melbourne	1927	62	Brussels	1924	108
Chicago	1927	63	Dublin	1927	108
Adelaide	1927	64	Prague	1924	110
Philadelphia ..	1927	64	Breslau	1927	112
Cape Town ..	1927	65	Montreal	1927	132
Newcastle, N.S.W. ..	1927	67	Warsaw	1926	143
Detroit	1927	70	Sao Paulo	1927	167
Toronto	1927	71	Colombo	1927	221
Birmingham ..	1927	72	Madras	1927	230
Hamburg	1927	74	Bombay	1927	316
Leeds	1927	77			

(*a*) Number of deaths under 1 year per 1,000 births registered.

(v) *Causes of Deaths of Children under one Year.* The following table gives for twenty-six causes the ages of all children who died under one year of age. Particulars for males and females may be found in Bulletin No. 45 of " Australian Demography."

CAUSES OF DEATHS OF CHILDREN UNDER ONE YEAR.—AUSTRALIA, 1927.

Age at Death.	Measles.	Whooping Cough.	Diphtheria.	Erysipelas.	Meningococcal Meningitis.	Pulmonary Tuberculosis.	Tubercular Meningitis.	Tuberculosis, other forms.	Syphilis.	Meningitis.	Convulsions.	Acute Bronchitis.	Broncho-Pneumonia.
Under 1 week	..	..	2	..	..	..	..	..	4	1	48	8	14
1 week and under 2 weeks	..	..	..	..	..	..	..	..	1	2	8	4	13
2 weeks ,, 3 ,,	1	2	2	2	..	..	..	..	2	2	5	11	24
3 ,, ,, 1 month	..	4	1	3	..	..	..	..	1	..	7	11	20
1 month ,, 2 months	..	41	2	5	..	..	..	..	4	6	3	34	98
2 months ,, 3 ,,	2	48	2	3	2	..	1	1	7	7	5	19	65
3 ,, ,, 4 ,,	..	31	1	2	4	..	1	..	8	7	7	8	47
4 ,, ,, 5 ,,	1	25	..	3	4	1	2	1	3	2	3	5	35
5 ,, ,, 6 ,,	1	15	1	3	..	..	..	2	2	7	3	5	34
6 ,, ,, 7 ,,	..	13	1	3	..	1	2	..	..	8	6	6	32
7 ,, ,, 8 ,,	1	17	..	2	1	2	1	1	1	8	1	1	43
8 ,, ,, 9 ,,	1	11	11	2	2	..	1	1	..	8	5	2	24
9 ,, ,, 10 ,,	1	10	6	1	..	2	2	..	..	13	2	7	25
10 ,, ,, 11 ,,	2	10	7	..	..	1	4	2	..	5	6	6	21
11 ,, ,, 1 year	3	11	3	..	2	2	2	1	1	6	3	3	43
Total under 1 year ..	13	238	39	29	15	9	16	9	34	82	112	130	538
Infantile Mortality (*a*) ..	0.10	1.78	0.29	0.22	0.11	0.07	0.12	0.07	0.25	0.61	0.84	0.97	4.02
Ex-nuptial deaths under 1 year included in above	1	13	3	..	..	..	1	1	11	6	8	8	53
Infantile Mortality (*b*) ..	0.16	2.07	0.48	..	..	..	0.16	0.16	1.75	0.95	1.27	1.27	8.43

Age at Death.	Pneumonia.	Pleurisy.	Other Diseases of Stomach.	Diarrhœa and Enteritis.	Hernia.	Intestinal Obstruction.	Malformation.	Congenital Debility, Icterus and Selerema.	Premature Birth.	Injury at Birth.	Other Diseases peculiar to Early Infancy.	Lack of Care.	Other Causes.	Total.
Under 1 week	10	..	..	5	..	1	293	327	1,550	327	296	5	85	2,976
1 week and under 2 weeks	7	..	..	8	..	2	60	53	149	17	25	..	27	376
2 weeks ,, 3 ,,	17	..	4	16	..	..	51	50	96	9	14	..	32	340
3 ,, ,, 1 month	8	..	5	21	..	2	26	46	70	8	9	..	20	262
1 month ,, 2 month	32	1	12	67	..	7	43	60	71	9	13	..	46	554
2 months ,, 3 ,,	20	..	6	88	..	2	44	45	28	3	3	..	34	435
3 ,, ,, 4 ,,	16	3	4	109	..	4	32	47	8	1	2	..	25	367
4 ,, ,, 5 ,,	28	3	7	116	1	6	21	23	4	..	1	..	27	322
5 ,, ,, 6 ,,	23	..	6	119	..	6	18	13	2	..	..	..	26	286
6 ,, ,, 7 ,,	26	..	5	93	..	3	10	18	1	1	..	..	28	257
7 ,, ,, 8 ,,	16	1	2	83	..	4	7	9	..	..	..	..	30	231
8 ,, ,, 9 ,,	26	1	2	93	1	2	8	9	1	..	..	..	33	244
9 ,, ,, 10 ,,	23	3	3	73	..	5	8	1	..	..	..	..	30	215
10 ,, ,, 11 ,,	13	..	4	74	..	3	6	4	..	..	..	..	30	198
11 ,, ,, 1 year	23	..	6	75	..	2	5	4	1	..	..	..	24	220
Total under 1 year ..	288	12	66	1,040	2	49	632	709	1,981	375	363	5	497	7,283
Infantile Mortality (*a*) ..	2.15	0.09	0.49	7.78	0.02	0.37	4.73	5.30	14.82	2.80	2.71	0.04	3.72	54.47
Ex-nuptial deaths under 1 year included in above	21	2	6	149	..	..	32	73	163	19	16	4	52	642
Infantile Mortality (*b*) ..	3.34	0.32	0.95	23.69	..	..	5.09	11.60	25.92	3.02	2.54	0.64	8.27	102.08

(*a*) Rate per 1,000 total births. (*b*) Rate per 1,000 ex-nuptial births.

Pre-natal influences, such as malformation, congenital debility, and premature birth, together with injuries at birth, accounted for 3,697, or 51 per cent., of all deaths under one year; and of these 3,697 deaths, 2,497, or 67 per cent., occurred within a week of birth. Among the survivors of the first week, diarrhœa and enteritis had the most fatal effects. These diseases were responsible for 1,040 deaths, representing 14 per cent. of all deaths under one year, or 7.78 per 1,000 births. Excluding deaths from pre-natal causes already referred to, over 40 per cent. of the deaths between three months and one year of age were due to diarrhœa and enteritis.

(vi) *Deaths of Ex-nuptial Children under one Year.* The deaths of ex-nuptial children were tabulated by this Bureau for the first time in 1925. The causes of death of these children in 1927 are shown as an addendum to the preceding table.

Pre-natal influences such as malformation, congenital debility, premature birth, and injuries at birth accounted for 287, or 44.7 per cent., and diarrhœa and enteritis for 149, or 23.2 per cent., of the total deaths.

8. Deaths in Age-Groups, 1923 to 1927.—A distribution into age-groups has been made of the 281,018 deaths which occurred in Australia from 1923 to 1927, and the results have been tabulated for each State. It is, however, sufficient to show here the results for Australia as a whole, which are as follow :—

DEATHS IN AGE GROUPS.—AUSTRALIA, 1923 TO 1927.

Age-Group.	Males.	Females.	Total.	Percentage on Total Males.	Percentage on Total Females.	Percentage on Total.
Under 1 year ..	21,233	16,376	37,609	13.45	13.43	13.38
1 year and under 5 ..	6,892	5,658	12,550	4.33	4.64	4.45
5 years and under 20 ..	7,681	5,797	13,478	4.83	4.75	4.80
20 years and under 40	17,295	16,660	33,955	10.87	13.67	12.08
40 years and under 60	34,841	23,064	57,905	21.90	18.92	20.61
60 years and under 65	14,624	9,019	23,643	9.19	7.40	8.41
65 years and over ..	56,357	45,314	101,671	35.42	37.17	36.20
Age unspecified ..	181	26	207	0.11	0.02	0.07
Total ..	159,104	121,914	281,018	100.00	100.00	100.00

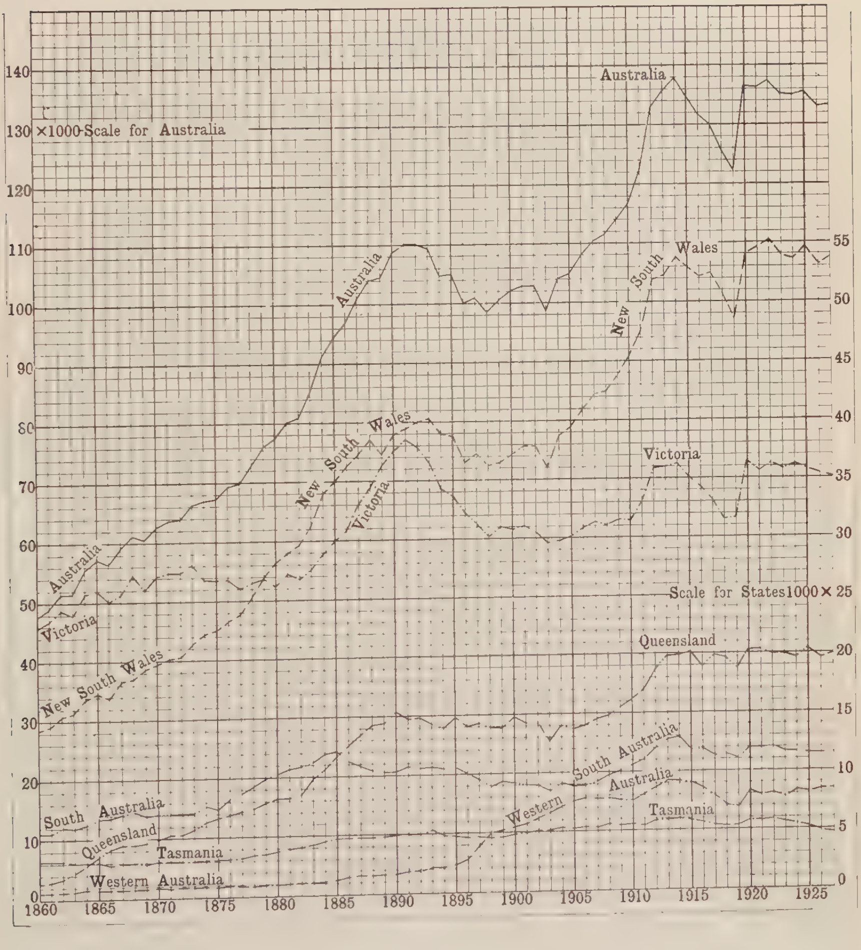
9. Deaths at Single Ages and in Age-Groups, 1927.—(i) *General.* The 58,282 deaths registered in Australia in the year 1927 will be found tabulated under single years, and in groups of five years for each State and Territory, in Bulletin No. 45 "Australian Demography, 1927." The deaths during the first two years of life have been tabulated in shorter periods. A summary for Australia is given in the following table :—

DEATHS AT SINGLE AGES AND IN AGE-GROUPS.—AUSTRALIA, 1927.

Ages.	Males.	Fe-males.	Total.	Ages.	Males.	Fe-males.	Total.
Total under 1 month ..	2,258	1,696	3,954	Total 20–24 years ..	750	692	1,442
,, 1 month and under 3	557	432	989	,, 25–29 ,, ..	774	774	1,548
,, 3 months and under 6	549	426	975	,, 30–34 ,, ..	854	874	1,728
,, 6 months and under 12	738	627	1,365	,, 35–39 ,, ..	1,134	1,016	2,150
				,, 40–44 ,, ..	1,386	968	2,354
				,, 45–49 ,, ..	1,651	1,059	2,710
Total under 1 year ..	4,102	3,181	7,283	,, 50–54 ,, ..	1,876	1,257	3,133
				,, 55–59 ,, ..	2,375	1,552	3,927
				,, 60–64 ,, ..	2,911	1,924	4,835
1 year and under 2 ..	711	577	1,288	,, 65–69 ,, ..	3,378	2,265	5,643
2 years	289	237	526	,, 70–74 ,, ..	3,065	2,206	5,271
3 ,, ...	242	191	433	,, 75–79 ,, ..	2,468	2,009	4,477
4 ,, ...	158	140	298	,, 80–84 ,, ..	1,757	1,675	3,432
				,, 85–89 ,, ..	991	1,125	2,116
				,, 90–94 ,, ..	335	397	732
Total under 5 years ..	5,502	4,326	9,828	,, 95–99 ,, ..	75	111	186
				,, 100 and over ..	14	16	30
				Age Unspecified ..	30	3	33
Total 5–9 years ..	522	425	947				
,, 10–14 ,, ..	421	294	715				
,, 15–19 ,, ..	589	456	1,045	Total All Ages ..	32,858	25,424	58,282

(ii) *Rates.* The following tables give the death rate per 1,000 living at each age for the three years 1920, 1921, and 1922, i.e., the Census year 1921, and the years immediately preceding and following. The Northern Territory is included with South Australia, and the Federal Capital Territory with New South Wales :—

BIRTHS—1860 TO 1927.

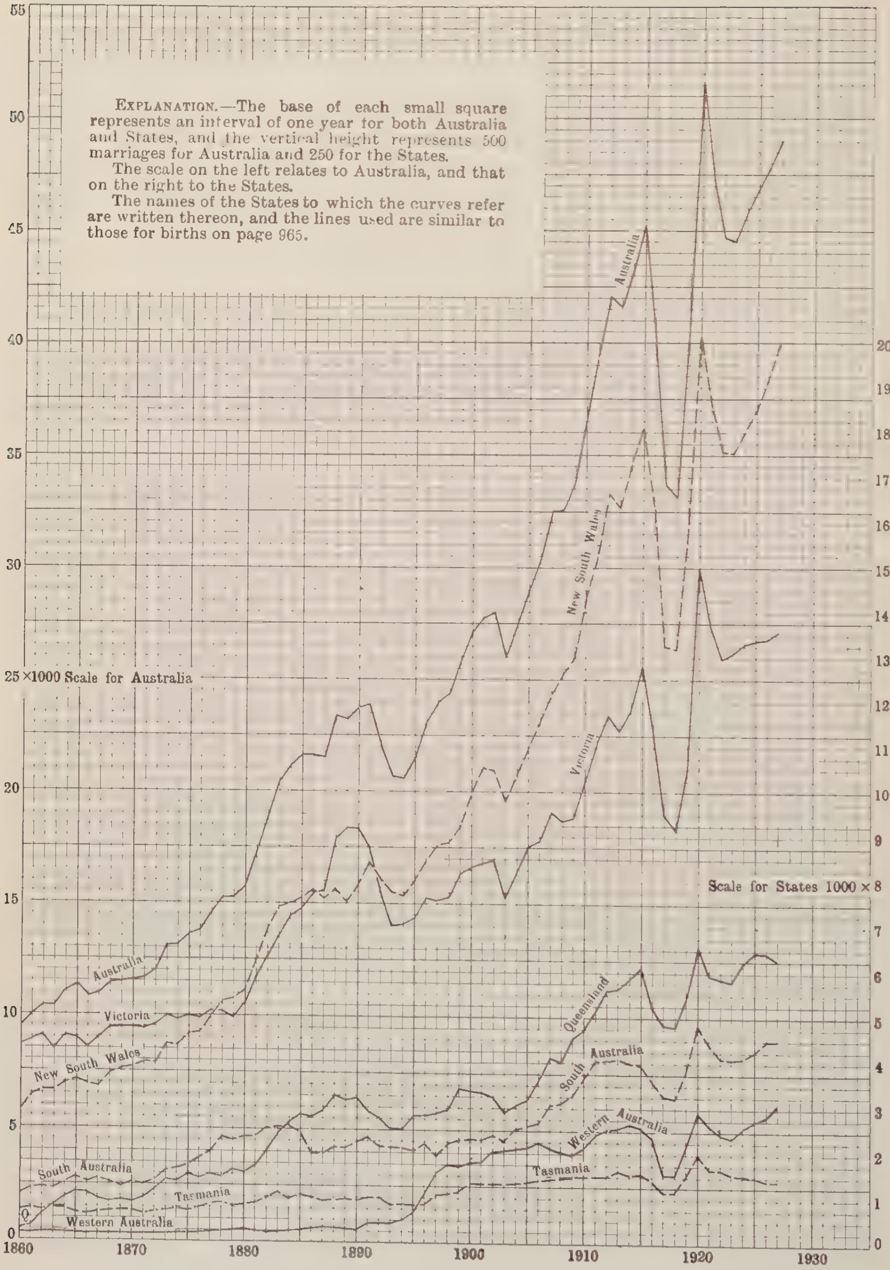


Explanation.—The base of each small square represents an interval of one year for both Australia and States, and the vertical height represents 2,000 persons for Australia and 1,000 for the States.

The scale on the left relates to Australia, and that on the right to the States.

The names of the States to which the curves refer are written thereon, and the characters of the lines used are as follows:—Australia, ————————; New South Wales, — — — — — — —; Victoria, — - — - — - — - —; Queensland, — — - - — - - — —; South Australia, — - - — - - - - — —; Western Australia, — — — - — — — - — — —; Tasmania, — — - — — - — — —.

MARRIAGES, 1860 TO 1927.

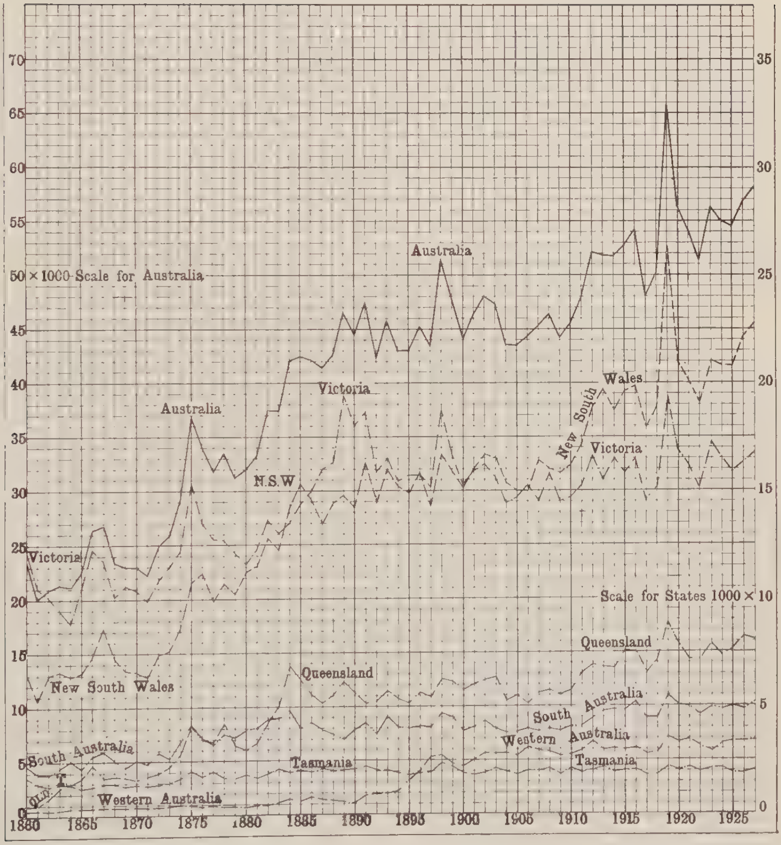


Explanation.—The base of each small square represents an interval of one year for both Australia and States, and the vertical height represents 500 marriages for Australia and 250 for the States.

The scale on the left relates to Australia, and that on the right to the States.

The names of the States to which the curves refer are written thereon, and the lines used are similar to those for births on page 965.

DEATHS—1860 TO 1927.

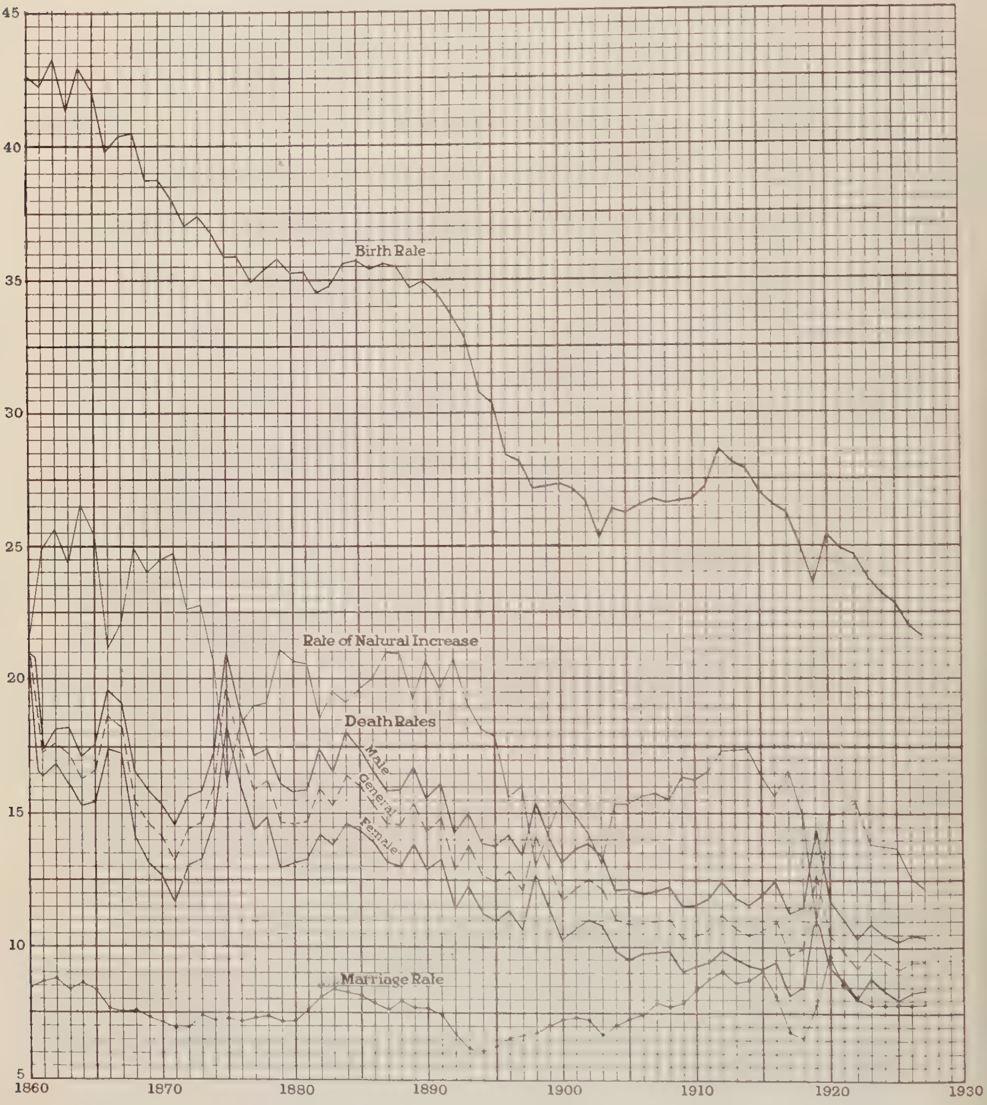


EXPLANATION.—The base of each small square represents an interval of one year for both Australia and States, and the vertical height represents 1,000 persons for Australia and 500 for the States.

The scale on the left relates to Australia, and that on the right to the States.

The names of the States to which the curves refer are written thereon, and the lines used are similar to those for births on page 965.

RATES—BIRTH, NATURAL INCREASE, DEATH (MALE, GENERAL AND FEMALE) AND MARRIAGE—AUSTRALIA, 1860 TO 1927.



Explanation.—The base of each small square represents one year's interval, and the vertical height one half per thousand of the population—the basic line being five per thousand of the population.

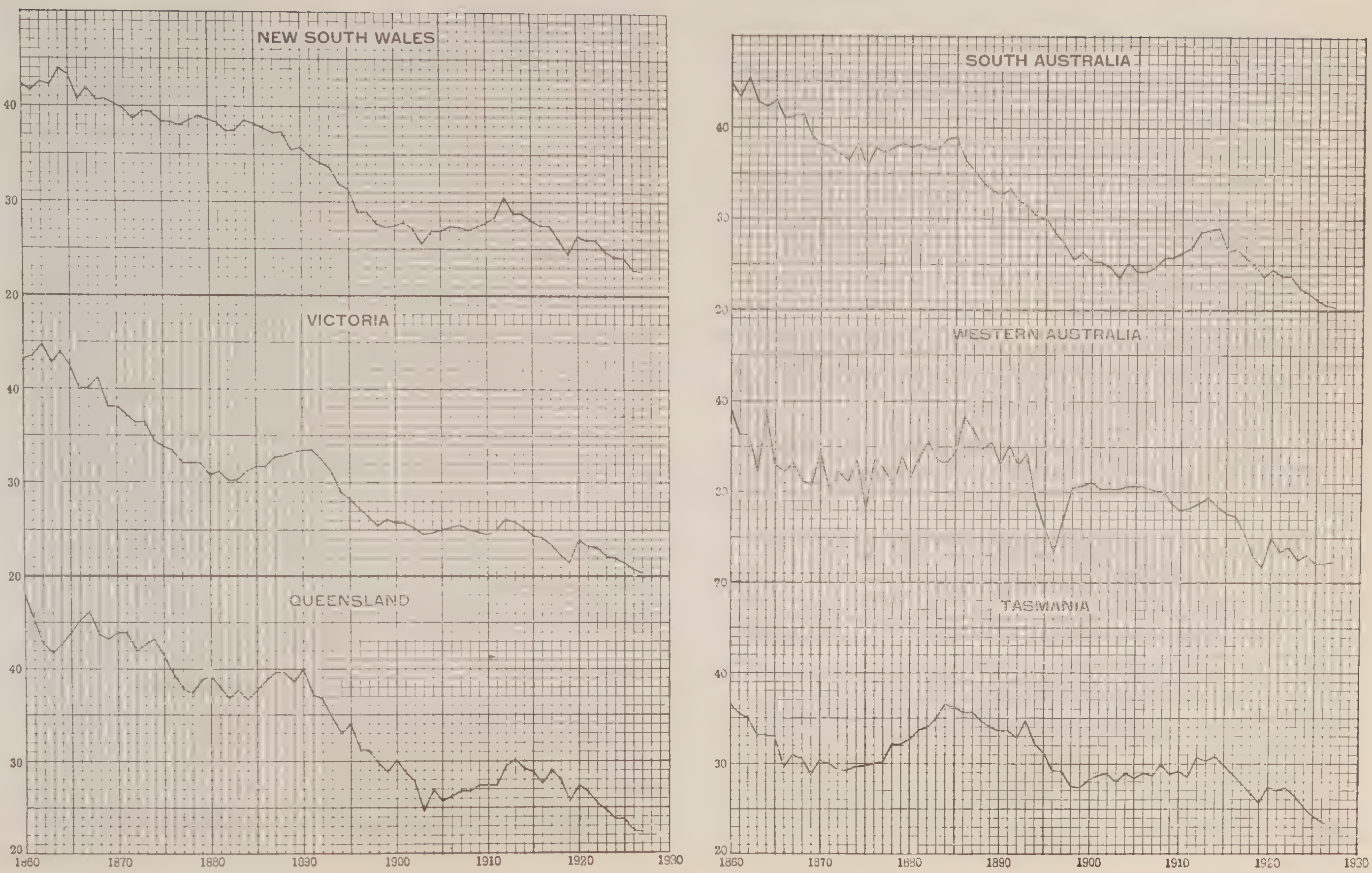
STATE BIRTH-RATE GRAPHS. (See page 969.)

Explanation.—The base of each small square represents one year's interval, and the vertical height one birth per thousand of the population—the basic line for each State being twenty per thousand of the population.

STATE DEATH-RATE GRAPHS. (See page 970.)

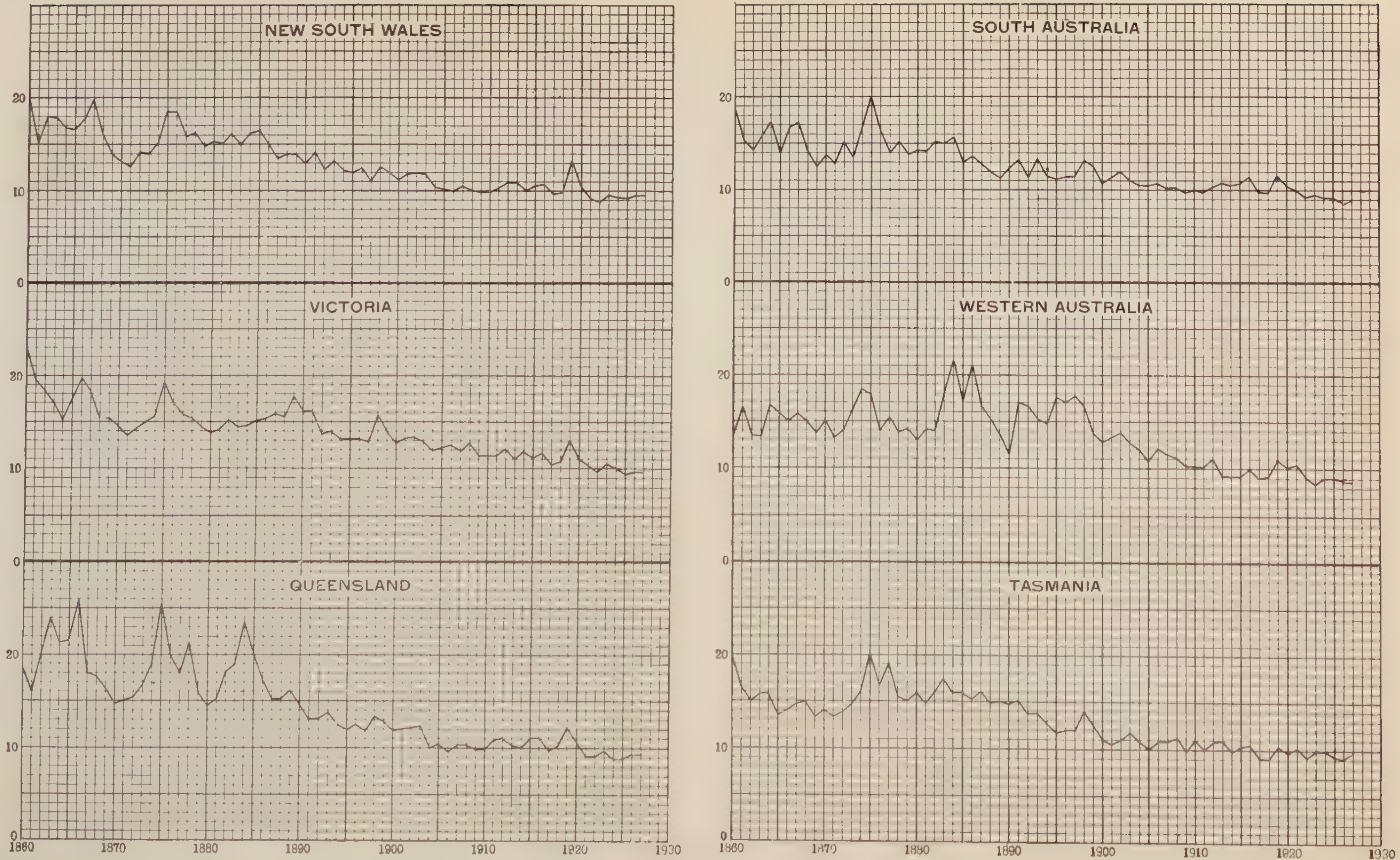
Explanation.—The base of each small square represents one year's interval, and the vertical height one death per thousand of the population. The zero for each State is shown by a thickened line.

BIRTH RATES—STATES, 1860-1927.



For explanation of above graph see page 968.

DEATH RATES—STATES, 1860-1927.



For explanation of above graph see page 968.

AVERAGE ANNUAL DEATH RATES.—AGE-GROUPS, 1920 TO 1922.

Age-Group.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
			MALES.				
0 to 4 years ..	21.49	22.61	20.73	20.01	23.88	20.72	21.64
5 ,, 9 ,, ..	1.85	2.15	1.96	2.25	2.24	2.04	2.02
10 ,, 14 ,, ..	1.59	1.61	1.58	1.56	1.42	1.83	1.59
15 ,, 19 ,, ..	2.16	2.07	2.90	2.42	2.37	2.66	2.30
20 ,, 24 ,, ..	2.74	3.06	3.54	3.33	3.96	3.23	3.10
25 ,, 29 ,, ..	3.36	3.60	4.37	3.64	4.08	5.05	3.70
30 ,, 34 ,, ..	4.13	3.70	4.58	4.00	5.40	4.59	4.16
35 ,, 39 ,, ..	5.36	5.32	5.95	5.18	6.42	4.79	5.48
40 ,, 44 ,, ..	7.85	6.60	7.86	6.20	7.90	5.98	6.89
45 ,, 49 ,, ..	9.61	9.80	10.60	8.81	12.09	8.71	9.91
50 ,, 54 ,, ..	12.38	12.24	14.23	11.76	17.18	11.51	12.90
55 ,, 59 ,, ..	18.72	18.24	20.34	19.70	23.76	13.44	19.04
60 ,, 64 ,, ..	28.35	28.48	30.36	25.63	34.19	23.95	28.71
65 ,, 69 ,, ..	43.00	44.38	44.93	42.31	49.51	38.53	43.74
70 ,, 74 ,, ..	65.81	65.16	64.56	62.01	72.15	53.55	64.88
75 ,, 79 ,, ..	105.54	107.84	103.32	106.23	115.56	109.46	106.53
80 ,, 84 ,, ..	159.12	163.74	159.06	161.73	184.49	132.47	160.73
85 ,, 89 ,, ..	271.79	266.12	227.79	226.87	283.46	232.39	259.17
90 and over ..	363.58	387.01	314.96	387.09	566.67	350.00	376.08
			FEMALES.				
0 to 4 years ..	16.92	17.91	16.05	16.25	18.80	16.74	17.09
5 ,, 9 ,, ..	1.66	1.95	1.89	2.27	1.28	2.09	1.82
10 ,, 14 ,, ..	1.21	1.20	1.43	1.34	1.23	1.63	1.27
15 ,, 19 ,, ..	1.63	2.00	1.99	2.72	1.34	2.58	1.90
20 ,, 24 ,, ..	2.43	2.92	2.81	2.85	3.07	3.74	2.75
25 ,, 29 ,, ..	3.47	3.55	3.61	3.85	3.99	3.87	3.59
30 ,, 34 ,, ..	3.85	4.13	4.11	4.21	4.60	4.41	4.06
35 ,, 39 ,, ..	4.64	4.98	5.80	5.18	4.90	5.98	5.00
40 ,, 44 ,, ..	5.15	5.74	6.03	4.98	6.39	5.48	5.51
45 ,, 49 ,, ..	6.71	6.91	6.76	6.40	8.12	7.31	6.87
50 ,, 54 ,, ..	9.35	9.11	9.11	9.10	10.62	8.61	9.27
55 ,, 59 ,, ..	13.17	12.87	13.60	10.85	12.81	14.23	12.92
60 ,, 64 ,, ..	19.08	19.06	19.71	18.27	17.78	20.13	19.05
65 ,, 69 ,, ..	31.59	31.69	30.81	32.89	30.49	34.72	31.76
70 ,, 74 ,, ..	50.24	51.83	50.61	45.65	54.20	49.42	50.43
75 ,, 79 ,, ..	88.19	88.52	88.10	83.98	96.43	80.32	87.81
80 ,, 84 ,, ..	140.29	143.71	126.40	132.25	137.07	126.00	138.32
85 ,, 89 ,, ..	225.11	231.45	210.65	193.54	219.51	208.79	221.44
90 and over ..	380.95	321.79	288.89	337.50	478.26	352.94	341.68
			PERSONS.				
0 to 4 years ..	19.24	20.30	18.45	18.17	21.39	18.75	19.40
5 ,, 9 ,, ..	1.76	2.05	1.93	2.26	1.76	2.07	1.92
10 ,, 14 ,, ..	1.40	1.40	1.51	1.45	1.33	1.73	1.43
15 ,, 19 ,, ..	1.90	2.03	2.45	2.57	1.86	2.62	2.10
20 ,, 24 ,, ..	2.58	2.99	3.17	3.09	3.52	3.49	2.92
25 ,, 29 ,, ..	3.42	3.57	4.00	3.75	4.03	4.43	3.64
30 ,, 34 ,, ..	3.99	3.92	4.37	4.10	5.03	4.50	4.11
35 ,, 39 ,, ..	5.03	5.14	5.88	5.18	5.72	5.39	5.24
40 ,, 44 ,, ..	5.99	6.16	7.04	5.60	7.23	5.73	6.22
45 ,, 49 ,, ..	8.21	8.30	8.89	7.62	10.41	8.04	8.44
50 ,, 54 ,, ..	10.97	10.67	12.04	10.46	14.58	10.16	11.20
55 ,, 59 ,, ..	16.19	15.60	17.57	15.32	19.61	13.80	16.22
60 ,, 64 ,, ..	24.11	23.93	25.99	22.13	27.90	22.13	24.22
65 ,, 69 ,, ..	37.81	37.90	39.23	37.80	41.71	36.73	38.17
70 ,, 74 ,, ..	58.34	58.09	58.64	53.85	64.31	51.54	57.82
75 ,, 79 ,, ..	97.02	97.07	96.41	94.82	106.68	93.60	96.98
80 ,, 84 ,, ..	149.75	152.49	144.74	145.42	162.58	128.81	149.09
85 ,, 89 ,, ..	248.05	246.87	219.48	206.49	252.00	219.14	238.91
90 and over ..	374.81	349.09	304.15	355.73	528.30	351.64	357.36

The high death rate for children under five years of age diminishes rapidly until, at ages 10 to 14, it stands at 1.43 per 1,000, which is the lowest at any age. The rate thereafter gradually rises with increasing age until, at the ages 90 and over, more than one-third die every year.

10. **Deaths of Centenarians, 1927.**—Particulars concerning the thirty persons—fourteen males and sixteen females—who died in 1927 aged 100 years and upwards, are given in the following table. While the Registrars-General of the various States verify the figures as far as possible, absolute reliance cannot be placed on their accuracy, owing to the well-known tendency of very old people to overstate their ages. In connexion with this question it may be noted that while parish registers in the United Kingdom often date very far back, compulsory registration of births dates practically from 1874 only, the Act of 1836 having left many loopholes for those unwilling to register the births of their children.

DEATHS OF CENTENARIANS.—AUSTRALIA, 1927.

Age.	Locality where Death occurred.	State.	Cause of Death.	Occupation.	Birthplace.	Length of Residence in Australia.	Conjugal Condition.
			MALES.				
105	Hobart ..	Tasmania	Senility ..	Miner ..	Scotland ..	75 years ..	Married
104	Port Fairy	Victoria ..	„ ..	Seaman ..	Ireland ..	80 years ..	Single
103	Narrabri ..	N.S.W. ..	Uraemia ..	Carrier ..	N.S.W. ..	Native ..	Married
103	Liverpool ..	„ ..	Influenzal Cold	Postmaster	„ ..	„ ..	Single
103	Perth ..	W. Aust...	Cirrhosis of Liver	Pensioner	England ..	60 years ..	Married
102	Geelong ..	Victoria ..	Senility ..	Not stated	„ ..	75 years ..	„
101	Mosman ..	N.S.W. ..	Senile Heart	Clergyman	Ireland ..	99 years ..	„
100	Sydney ..	„ ..	Senility ..	Farmer ..	„ ..	77 years ..	„
100	Yass ..	„ ..	Arterio-Sclerosis	Miner ..	Norway ..	65 years ..	Single
100	Drouin ..	Victoria ..	Senility ..	Farmer ..	Italy ..	42 years ..	Married
100	Forrest ..	„ ..	Bronchitis ..	Teacher ..	England ..	75 years ..	„
100	Brisbane ..	Queensland	Senility ..	Vagrant ..	China ..	55 years ..	Single
100	Adelaide ..	Sth. Aust.	„ ..	Retired ..	Ireland ..	Not stated	Not stated
100	Deloraine ..	Tasmania	Bronchitis ..	Farmer ..	„ ..	98 years ..	Married
			FEMALES.				
107	Cheltenham	Victoria ..	Senility ..	.. ..	Ireland ..	80 years ..	Not stated
102	St. Peters	N.S.W. ..	„ ..	.. ..	Scotland ..	51 years ..	Married
102	Muswellbrook	„ ..	Myocarditis	.. ..	Ireland ..	90 years ..	„
102	Bathurst ..	„ ..	Senile Heart	.. ..	„ ..	72 years ..	Single
102	Woodend ..	Victoria ..	Bronchitis ..	.. ..	„ ..	70 years ..	Married
102	Yankalilla..	Sth. Aust.	Gangrene of Foot	.. ..	England ..	77 years ..	„
102	Adelaide ..	„	Senility ..	.. ..	„ ..	74 years ..	„
101	Sutherland	N.S.W. ..	Chronic Bronchitis	.. ..	„ ..	83 years ..	„
101	Armadale ..	Victoria ..	Senility ..	.. ..	„ ..	Not stated	„
101	Malvern East	„ ..	„ ..	.. ..	„ ..	74 years ..	„
101	Brunswick	„ ..	„ ..	.. ..	„ ..	52 years ..	„
100	Maitland West	N.S.W. ..	„ ..	.. ..	„ ..	17 years ..	„
100	Kiama ..	„ ..	„ ..	.. ..	Ireland ..	46 years ..	„
100	Bunyip ..	Victoria ..	„ ..	.. ..	„ ..	50 years ..	„
100	Adelaide ..	Sth. Aust.	„ ..	.. ..	England ..	91 years ..	Single
100	Boulder ..	W. Aust...	Gastro-Enteritis	.. ..	Ireland ..	30 years ..	Married

NOTE.—The particulars shown in this table are those given in the death certificates, and no attempt has been made by the Commonwealth Bureau of Census and Statistics to verify them.

11. **Length of Residence in Australia of Persons who died in 1927.**—The length of residence in Australia of all persons whose deaths were registered in the year 1927 is shown in the following table :—

LENGTH OF RESIDENCE IN AUSTRALIA OF PERSONS WHO DIED IN 1927.

Length of Residence.	Male Deaths.	Female Deaths.	Total Deaths.
Born in Australia ..	21,312	17,789	39,101
Resident under 1 year ..	120	53	173
,, 1 year ..	100	57	157
,, 2 years ..	96	59	155
,, 3 ,, ..	83	61	144
,, 4 ,, ..	85	41	126
,, 5 ,, ..	89	54	143
,, 6 ,, ..	63	69	132
,, 7 ,, ..	63	61	124
,, 8 ,, ..	32	40	72
,, 9 ,, ..	16	15	31
,, 10 to 14 years	364	300	664
,, 15 to 19 ,,	681	412	1,093
,, 20 to 24 ,,	292	150	442
Resident 25 to 29 years	306	125	431
,, 30 to 34 ,, ..	537	196	733
,, 35 to 39 ,, ..	622	352	974
,, 40 to 44 ,, ..	1,572	895	2,467
,, 45 to 49 ,, ..	903	562	1,465
,, 50 to 54 ,, ..	978	603	1,581
,, 55 to 59 ,, ..	438	295	733
,, 60 to 64 ,, ..	736	685	1,421
,, 65 yrs. and over	1,604	2,001	3,605
Length of residence not stated	1,766	549	2,315
Total ..	32,858	25,424	58,282

12. Birthplaces of Persons who Died in 1927.—The following table gives the birthplaces of persons whose deaths were registered in 1927. More detailed information will be found in "Australian Demography," Bulletin No. 45.

BIRTHPLACES OF PERSONS WHO DIED IN 1927.—AUSTRALIA.

Birthplace.	Males.	Females.	Persons.
AUSTRALASIA—			
New South Wales	8,138	6,802	14,940
Victoria ..	6,819	5,659	12.478
Queensland ..	2,313	1,824	4,137
South Australia	2,216	1,848	4,064
Western Australia	625	533	1,158
Tasmania ..	1,182	1,102	2,284
Northern Territory	11	8	19
Federal Capital Territory ..	8	13	21
New Zealand ..	236	163	399
EUROPE—			
England and Wales	5,419	3,786	9,205
Scotland ..	1,423	1,034	2,457
Ireland ..	1,822	1,795	3,617
Other Brit. Possessions in Europe	38	30	68
Austria ..	18	7	25
Denmark ..	116	28	144
Finland ..	26	..	26
France.. ..	50	23	73
Germany ..	440	254	694
Greece ..	44	7	51
Italy	151	38	189
Netherlands ..	18	1	19
Norway ..	75	7	82
Poland ..	31	15	46
Russia ..	28	17	45
Sweden ..	111	17	128
Switzerland ..	33	4	37
Other European Countries ..	72	6	78
ASIA—			
British India and Ceylon ..	87	35	122
China	261	4	265
Japan	18	2	20
Other Asiatic Countries ..	55	12	67
AFRICA—			
Union of Sth. Africa	25	19	44
Other African Countries ..	18	13	31
AMERICA—			
Canada ..	48	19	67
United States of America ..	75	38	113
Other American Countries ..	38	13	51
POLYNESIA—			
Other Polynesian Islands ..	47	12	59
At Sea	74	66	140
Unspecified ..	649	170	819
Total Deaths..	32,858	25,424	58,282

13. Occupations of Males who Died in 1927.—(i) *Australia, 1927.* Information as to the main groups of the occupations of the 32,858 males who died in Australia in 1927 is contained in the following table :—

OCCUPATIONS OF MALES WHO DIED IN 1927.—AUSTRALIA.

Occupations.	No. of Deaths.
CLASS I.—PROFESSIONAL.	
Government, Defence, Law ..	571
Others	840
Total Class I.	1,411
CLASS II.—DOMESTIC.	
Board and lodging	484
Others	376
Total Class II.	860
CLASS III.—COMMERCIAL.	
Property and finance	333
Art, mechanic and textile products	253
Food and drinks	589
Animal and vegetable substances	94
Fuel, light and metals	72
Merchants and dealers ..	685
Others	1,367
Total Class III. ..	3,393
CLASS IV.—TRANSPORT AND COMMUNICATION.	
Railway traffic	739
Road and tramway traffic ..	756
Sea and River traffic	645
Others	212
Total Class IV.	2,352
CLASS V.—INDUSTRIAL.	
Art and Mechanic productions ..	1,086
Textiles and fibrous materials ..	482
Food and drinks	342
Animal and vegetable substances	110
Metals and minerals	639
Fuel, light and energy	135
Building and construction ..	1,554
Others	5,927
Total Class V.	10,275
CLASS VI.—AGRICULTURAL, PASTORAL, MINING, ETC.	
Agricultural	3,480
Pastoral	1,058
Mining and quarrying	1,328
Others	234
Total Class VI.	6,100
CLASS VII.—INDEFINITE.	
Independent means	657
Occupation unspecified ..	1,157
Total Class VII.	1,814
CLASS VIII.—DEPENDENTS ..	6,653
Total Male Deaths ..	32,858

(ii) *Australia, 1923 to 1927.* The male deaths in Australia grouped according to the main classes of occupations, and the percentage of each class on the total male deaths for the five years 1923 to 1927, are shown in the table hereunder: —

OCCUPATIONS OF MALES WHO DIED IN AUSTRALIA, 1923 TO 1927.

Occupation.		1923.	1924.	1925.	1926.	1927.
Class I. Professional ..	Total	1,339	1,327	1,378	1,432	1,411
	Per cent.	4.23	4.27	4.43	4.42	4.29
II. Domestic ..	Total	803	802	840	799	860
	Per cent.	2.54	2.58	2.70	2.47	2.62
III. Commercial ..	Total	2,914	3,063	3,067	3,251	3,393
	Per cent.	9.22	9.85	9.85	10.04	10.32
IV. Transport and communication	Total	1,931	2,041	2,102	2,344	2,352
	Per cent.	6.11	6.56	6.75	7.24	7.16
V. Industrial ..	Total	9,509	9,510	9,555	9,922	10,275
	Per cent.	30.07	30.57	30.69	30.64	31.27
VI. Agricultural, Pastoral, Mining, etc.	Total	5,902	5,959	6,101	6,105	6,100
	Per cent.	18.66	19.16	19.60	18.85	18.57
VII. Indefinite ..	Total	1,866	1,431	1,539	1,760	1,814
	Per cent.	5.90	4.60	4.94	5.43	5.52
VIII. Dependents ..	Total	7,358	6,970	6,552	6,774	6,653
	Per cent.	23.27	22.41	21.04	20.91	20.25
Total ..	..	31,622	31,103	31,134	32,387	32,858

14. **Causes of Death.**—(i) *General.* The classification adopted by the Commonwealth Bureau of Census and Statistics is that of the International Institute of Statistics, as amended by the Committees of Revision which met in 1909 and 1920. The detailed classification groups causes of death under 205 headings in the following categories:—

i. Epidemic, Endemic, and Infectious Diseases.
ii. General Diseases not included in (i).
iii. Diseases of the Nervous System and Organs of Sense.
iv. Diseases of the Circulatory System.
v. Diseases of the Respiratory System.
vi. Diseases of the Digestive System.
vii. Diseases of the Genito-urinary System and Adnexa.
viii. Puerperal Condition.
ix. Diseases of the Skin and Cellular Tissue
x. Diseases of the Organs of Locomotion.
xi. Malformations.
xii. Early Infancy.
xiii. Old Age.
xiv. External Causes.
xv. Ill-defined Diseases.

(ii) *Mortality Statistics for 1907 and Subsequent Years.* The statistics relating to causes of death in Australia from the year 1907 onward have been tabulated in the Commonwealth Bureau of Census and Statistics in accordance with the above-mentioned classification, and the system is being employed also in the various State statistical offices.

(iii) *Classification of Causes of Death, 1923 to 1927, according to Abridged International Classification.* An abridged classification, which enumerates thirty-eight diseases and groups of diseases according to the revised classification, is in use in many European countries and American States, and a table has been prepared showing the causes of death according to the abridged classification, so that the results may be compared with those of countries which use the abridged index.

The compilations for the years 1923 to 1927 will be found in full in Bulletins Nos. 41 to 45 of "Australian Demography." In the following tables showing deaths of males, females, and persons for the year 1927, the abridged classification has been employed.

CAUSES OF DEATH.—MALES, 1927.

Cause.	N.S.W.	Vic.	Q'land.	S. Aus.	W. Aus.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
1 Typhoid Fever ..	47	20	15	8	9	4	..	..	103
2 Typhus Fever ..	..	..	..	1	1	..	..	..	2
3 Malaria	5	1	13	..	2	..	2	..	23
4 Small-pox	..	..	..	..	..	..	..	..	..
5 Measles	8	30	16	3	..	..	..	..	57
6 Scarlet Fever ..	48	8	1	1	2	1	..	1	62
7 Whooping Cough ..	96	21	27	15	9	..	..	..	168
8 Diphtheria	99	51	50	9	3	5	1	..	218
9a Influenza—Pneumonic	77	19	21	3	9	4	..	..	133
9b Influenza—other ..	49	15	22	1	7	3	..	..	97
10 Asiatic Cholera ..	..	..	..	..	..	..	..	..	..
11 Cholera Nostras ..	..	..	..	..	..	..	..	..	..
12 Other Epidemic Diseases	62	49	23	22	8	2	..	..	166
13 Tuberculosis of the Respiratory System	648	504	243	167	174	52	6	..	1,794
14 Tuberculosis of the Meninges	35	42	3	10	3	8	..	..	101
15 Other forms of Tuberculosis	44	59	8	13	5	3	2	..	134
16 Cancer and other Malignant Tumours ..	1,169	811	392	262	200	108	2	1	2,945
17 Meningitis	70	35	29	13	9	6	..	..	162
18 Hæmorrhage, Embolism, and Softening of Brain	617	456	219	145	87	49	..	1	1,574
19 Diseases of the Heart	2,162	1,214	639	300	219	167	5	4	4,710
20 Acute Bronchitis ..	80	43	20	20	4	9	..	..	176
21 Chronic Bronchitis ..	164	141	65	39	30	10	..	..	449
22 Pneumonia	776	427	213	132	90	63	2	4	1,707
23 Other Diseases of the Respiratory System (Tuberculosis excptd.)	569	573	247	123	108	42	1	1	1,664
24 Diseases of the Stomach (Cancer excepted) ..	156	100	56	19	23	13	..	..	367
25a Diarrhoea and Enteritis (children under 2 years of age) ..	278	205	150	39	53	27	..	3	755
25b Diarrhœa and Enteritis (2 years and over) ..	124	59	53	12	17	6	1	..	272
26 Appendicitis & Typhlitis	128	73	44	28	25	7	..	1	306
27 Hernia, Intestinal Obstruction	91	75	46	25	22	13	2	1	275
28 Cirrhosis of the Liver	83	77	44	25	15	2	..	..	246
29 Acute and Chronic Nephritis	672	485	266	160	96	52	1	1	1,733
30 Non-cancerous Tumours and other Diseases of Female Genital Organs	..	..	..	..	..	..	..	..	..
31 Puerperal Septicæmia (Puerperal Fever) ..	..	..	..	..	..	..	..	..	..
32 Other Puerperal Accidents of Pregnancy and Confinement ..	..	..	..	..	..	..	..	..	..
33 Congenital Debility and Malformation ..	827	616	325	184	110	85	1	2	2,150
34 Senility	587	489	349	210	139	75	13	..	1,862
35a Homicide	27	16	5	7	6	2	..	1	64
35b Other Accidental Deaths	1,125	662	395	261	223	66	18	8	2,758
36 Suicide	209	150	108	51	63	17	..	..	598
37 Other Diseases ..	1,779	1,334	697	385	287	165	7	3	4,657
38 Unspecified or Ill-defined Diseases	56	122	42	80	57	8	5	..	370
Total—Males ..	12,967	8,982	4,846	2,773	2,115	1,074	69	32	32,858

CAUSES OF DEATH.—FEMALES, 1927.

Cause.	N.S.W.	Vic.	Q'land.	S. Aus.	W. Aus.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
1 Typhoid Fever ..	22	10	15	5	1	5	..	..	58
2 Typhus Fever ..	..	..	..	..	..	..	..	..	..
3 Malaria	..	..	5	..	..	..	1	..	6
4 Small-pox	..	..	..	..	..	..	..	..	..
5 Measles	12	21	19	4	..	..	..	..	56
6 Scarlet Fever ..	65	21	8	1	..	1	..	1	97
7 Whooping Cough ..	115	31	27	19	15	..	..	2	209
8 Diphtheria	79	42	35	6	3	5	..	..	170
9a Influenza—Pneumonic	58	19	20	1	4	3	..	..	105
9b Influenza—other ..	48	16	18	2	5	3	..	..	92
10 Asiatic Cholera ..	..	..	..	..	..	..	..	..	..
11 Cholera Nostras ..	..	..	..	..	..	..	..	..	..
12 Other Epidemic Diseases	70	50	11	18	6	..	..	..	155
13 Tuberculosis of the Respiratory System	405	440	115	151	57	68	..	..	1,236
14 Tuberculosis of the Meninges	19	42	2	6	4	5	..	..	78
15 Other forms of Tuberculosis	33	30	4	15	7	9	..	..	98
16 Cancer and other Malignant Tumours ..	1,039	918	340	268	138	108	..	2	2.813
17 Meningitis	52	27	15	7	7	3	..	..	111
18 Hæmorrhage, Embolism, and Softening of Brain	650	557	159	165	87	65	..	..	1,683
19 Diseases of the Heart	1,623	1,071	410	282	159	135	1	2	3,683
20 Acute Bronchitis ..	89	30	21	14	10	3	..	1	168
21 Chronic Bronchitis ..	136	118	27	34	8	18	..	..	341
22 Pneumonia	452	293	141	95	43	47	1	..	1,072
23 Other Diseases of the Respiratory System (Tuberculosis excptd.)	445	362	120	92	62	21	1	..	1,103
24 Diseases of the Stomach (Cancer excepted) ..	65	51	22	19	5	5	..	..	167
25a Diarrhœa and Enteritis (children under 2 years of age) ..	232	146	115	29	40	10	..	3	575
25b Diarrhœa and Enteritis (2 years and over) ..	95	61	48	11	18	8	..	..	241
26 Appendicitis & Typhlitis	73	56	29	10	6	3	..	..	177
27 Hernia, Intestinal Obstruction	83	76	33	25	13	11	..	1	242
28 Cirrhosis of the Liver	33	29	6	3	3	1	..	..	75
29 Acute and Chronic Nephritis	468	469	231	107	56	33	..	1	1,365
30 Non-cancerous Tumours and other Diseases of Female Genital Organs	64	47	31	14	15	7	..	1	179
31 Puerperal Septicæmia (Puerperal Fever) ..	139	78	25	17	18	10	..	1	288
32 Other Puerperal Accidents of Pregnancy and Confinement ..	213	118	86	38	32	17	..	..	504
33 Congenital Debility and Malformation ..	657	436	240	142	93	64	1	1	1,634
34 Senility	455	649	230	234	95	97	..	1	1,761
35a Homicide	13	14	6	8	2	3	..	..	46
35b Other Accidental Deaths	304	182	101	109	42	20	1	3	762
36 Suicide	53	37	22	9	15	6	..	..	142
37 Other Diseases ..	1,400	1,170	475	345	188	153	1	..	3,732
38 Unspecified or Ill-defined Diseases	23	74	20	50	21	12	..	..	200
Total—Females ..	9,782	7,791	3,232	2.355	1.278	959	7	20	25,424

CAUSES OF DEATH.—PERSONS, 1927.

Cause.	N.S.W.	Vic.	Q'land.	S. Aus.	W. Aus.	Tas.	Nor. Ter.	Fed. Cap. Ter.	Australia.
1 Typhoid Fever	69	30	30	13	10	9	..	..	161
2 Typhus Fever ..	..	..	..	1	1	..	..	..	2
3 Malaria	5	1	18	..	2	..	3	..	29
4 Small-pox	..	..	..	..	..	..	..	..	..
5 Measles	20	51	35	7	..	..	..	..	113
6 Scarlet Fever ..	113	29	9	2	2	2	..	2	159
7 Whooping Cough ..	211	52	54	34	24	..	..	2	377
8 Diphtheria	178	93	85	15	6	10	1	..	388
9a Influenza—Pneumonic	135	38	41	4	13	7	..	..	238
9b Influenza—other ..	97	31	40	3	12	6	..	..	189
10 Asiatic Cholera ..	..	..	..	..	..	..	..	..	..
11 Cholera Nostras ..	..	..	..	..	..	..	..	..	..
12 Other Epidemic Diseases	132	99	34	40	14	2	..	..	321
13 Tuberculosis of the Respiratory System	1,053	944	358	318	231	120	6	..	3,030
14 Tuberculosis of the Meninges	54	84	5	16	7	13	..	..	179
15 Other forms of Tuberculosis	77	89	12	28	12	12	2	..	232
16 Cancer and other Malignant Tumours ..	2,208	1,729	732	530	338	216	2	3	5,758
17 Meningitis	122	62	44	20	16	9	..	..	273
18 Hæmorrhage, Embolism, and Softening of Brain	1,267	1,013	378	310	174	114	..	1	3,257
19 Diseases of the Heart	3,785	2,285	1,049	582	378	302	6	6	8,393
20 Acute Bronchitis ..	169	73	41	34	14	12	..	1	344
21 Chronic Bronchitis ..	300	259	92	73	38	28	..	..	790
22 Pneumonia	1,228	720	354	227	133	110	3	4	2,779
23 Other Diseases of the Respiratory System (Tuberculosis exceptd.)	1,014	935	367	215	170	63	2	1	2,767
24 Diseases of the Stomach (Cancer excepted) ..	221	151	78	38	28	18	..	..	534
25a Diarrhœa and Enteritis (children under 2 years of age) ..	510	351	265	68	93	37	..	6	1,330
25b Diarrhœa and Enteritis (2 years and over) ..	219	120	101	23	35	14	1	..	513
26 Appendicitis & Typhlitis	201	129	73	38	31	10	..	1	483
27 Hernia, Intestinal Obstruction	174	151	79	50	35	24	2	2	517
28 Cirrhosis of the Liver	116	106	50	28	18	3	..	..	321
29 Acute and Chronic Nephritis	1,140	954	497	267	152	85	1	2	3,098
30 Non-cancerous Tumours and other Diseases of Female Genital Organs	64	47	31	14	15	7	..	1	179
31 Puerperal Septicæmia (Puerperal Fever) ..	139	78	25	17	18	10	..	1	288
32 Other Puerperal Accidents of Pregnancy and Confinement ..	213	118	86	38	32	17	..	..	504
33 Congenital Debility and Malformation ..	1,484	1,052	565	326	203	149	2	3	3,784
34 Senility	1,042	1,138	579	444	234	172	13	1	3,623
35a Homicide	40	30	11	15	8	5	..	1	110
35b Other Accidental Deaths	1,429	844	496	370	265	86	19	11	3,520
36 Suicide	262	187	130	60	78	23	..	..	740
37 Other Diseases ..	3,179	2,504	1,172	730	475	318	8	3	8,389
38 Unspecified or Ill-defined Diseases	79	196	62	130	78	20	5	..	570
Total—Persons ..	22,749	16,773	8,078	5,128	3,393	2,033	76	52	58,282

The next table shows the total deaths in Australia during the last five years in accordance with the abridged classification alluded to previously.

CAUSES OF DEATH.—AUSTRALIA, 1923 TO 1927.

PERSONS.

Cause.	1923.	1924.	1925.	1926.	1927.
1 Typhoid Fever	242	218	170	183	161
2 Typhus Fever	1	..	3	2	2
3 Malaria	21	30	35	25	29
4 Small-pox	..	..	..	1	..
5 Measles	222	119	130	108	113
6 Scarlet Fever	45	55	55	81	159
7 Whooping Cough	119	420	463	340	377
8 Diphtheria	395	437	273	322	388
9*a* Influenza—Pneumonic	769	341	190	470	238
9*b* Influenza—other	441	241	161	285	189
10 Asiatic Cholera	..	..	..	..	..
11 Cholera Nostras	3	2	..	2	..
12 Other Epidemic Diseases	341	340	419	526	321
13 Tuberculosis of the Respiratory System	3,102	3,066	2,994	3,142	3,030
14 Tuberculosis of the Meninges	159	167	156	166	179
15 Other forms of Tuberculosis	283	316	274	237	232
16 Cancer and other Malignant Tumours	5,073	5,424	5,477	5,700	5,758
17 Meningitis	438	415	237	276	273
18 Hæmorrhage, Embolism, and Softening of the Brain	2,989	2,305	3,038	3,149	3,257
19 Diseases of the Heart	5,898	6,294	7,486	7,692	8,393
20 Acute Bronchitis	351	300	260	248	344
21 Chronic Bronchitis	892	808	741	766	790
22 Pneumonia	2,726	2,374	2,218	2,469	2,779
23 Other Diseases of the Respiratory System (Tuberculosis excepted)	2,901	2,742	2,522	2,534	2,767
24 Diseases of the Stomach (Cancer excepted)	444	437	475	529	534
25*a* Diarrhœa and Enteritis (children under two years only)	2,338	1,810	1,386	1,614	1,330
25*b* Diarrhœa and Enteritis (2 years and over)	624	486	442	549	513
26 Appendicitis and Typhlitis	436	408	438	476	483
27 Hernia, Intestinal Obstruction	508	551	564	578	517
28 Cirrhosis of the Liver	273	300	312	312	321
29 Acute and Chronic Nephritis	2,460	2,893	2,978	2,989	3,098
30 Non-cancerous Tumours and other Diseases of the Female Genital Organs	174	199	165	166	179
31 Puerperal Septicæmia (Puerperal Fever, Peritonitis)	233	265	236	218	288
32 Other Puerperal Accidents of Pregnancy and Confinement	458	473	530	488	504
33 Congenital Debility and Malformation	4,025	3,859	3,688	3,717	3,784
34 Senility	4,685	4,156	3,563	3,562	3,623
35 Violent Deaths—					
(*a*) Homicide	92	108	83	103	110
(*b*) Other Accidental Deaths	2,582	2,833	3,134	3,393	3,520
36 Suicide	590	653	700	711	740
37 Other Diseases	8,203	8,400	7,924	8,133	8,389
38 Unspecified or Ill-defined Diseases	691	735	648	690	570
Total	56,236	54,980	54,568	56,952	58,282

NOTE.—In consequence of changes made in the classification of the causes of death the figures given in the table above are not on identical lines throughout the period covered.

15. Deaths from Specific Causes.—The above table furnishes particulars for the last five years only, and comparisons will, therefore, generally be restricted to that period.

(i) *Typhoid Fever.* The number of deaths from typhoid fever declined from 242 in 1923 to 161 in 1927, the rate for the latter year being 3 per 100,000 living, and much lower than the average for the last five years. Of the 161 who died, 103 were males and 58 females.

(ii) *Typhus.* Deaths from typhus have been rare in Australia. During 1927, 2 deaths were recorded from this cause, 1 of which occurred in South Australia and 1 in Western Australia. In 1926 there were 2 deaths, one of which occurred in Victoria and 1 in South Australia. In 1925 there were 2 deaths in Queensland and 1 in South Australia. In 1923 1 death occurred in South Australia. These represent the only deaths recorded from typhus in Australia.

(iii) *Malaria.*—Deaths from malarial diseases are mainly confined to the tropical districts of Northern Queensland and Western Australia, and to the Northern Territory; 18 out of the 29 deaths registered in 1927 occurred in Queensland, 5 in New South Wales, 3 in the Northern Territory, 2 in Western Australia, and 1 in Victoria.

(iv) *Small-pox.* The number of deaths from small-pox in Australia is very small, and during the five years under review only one death occurred from this cause.

(v) *Measles.* Of the deaths from measles the greatest number took place in 1923, when 222 were registered, while the minimum was in 1926 with a total of 108 deaths. During 1927 there were 113 deaths, of which 57 were males and 56 females; of these, 20 were registered in New South Wales, 51 in Victoria, 35 in Queensland, and 7 in South Australia.

(vi) *Scarlet Fever.* The number of deaths increased during 1927, when there were 159 deaths, of which 62 were males and 97 females. Of these deaths 113 occurred in New South Wales.

(vii) *Whooping Cough.* In 1927 there were 377 deaths, of which 168 were males and 209 females. The deaths in each State were as follow:—New South Wales 211, Victoria 52, Queensland 54, South Australia 34, Western Australia 24, and 2 in the Federal Capital Territory. The death rate in 1927 was 6 per 100,000 persons.

(viii) *Diphtheria.* The number of deaths due to diphtheria was 388 in 1927. Of these deaths (representing a death rate of 6 per 100,000 persons) 218 were males and 170 females. The numbers in each State were as follow:—New South Wales 178, Victoria 93, Queensland 85, South Australia 15, Western Australia 6, Tasmania 10, and 1 in the Northern Territory.

(ix) *Influenza.* The deaths from influenza during 1927 were less than in 1923, when they were more numerous than in any year since the extraordinary epidemic of 1919. In 1927, there were 427 deaths from this disease, of which 238 were ascribed to pneumonic influenza and 189 to ordinary influenza.

(x) *Asiatic Cholera.* No deaths from Asiatic cholera have been recorded in Australia.

(xi) *Cholera Nostras.* For the five years under review only 7 deaths have been due to this cause.

(xii) *Other Epidemic Diseases.* The deaths registered under this heading numbered 321 in 1927, including 90 from erysipelas, dysentery 87, lethargic encephalitis 63, meningococcal meningitis 30, acute poliomyelitis 26, mumps 7, spirochetal haemorrhagic jaundice 5, leprosy 4, and other epidemic diseases 9. During the period 1923-27 there was only 1 death from plague, which occurred in New South Wales in 1923.

(xiii) *Tuberculosis of the Respiratory System.* Of the various forms of tuberculosis prevalent in Australia, phthisis, or tuberculosis of the lungs, has attracted the most attention. The intimate relation, however, between tuberculosis of the lungs and of other parts of the respiratory system renders it desirable that all forms of tuberculosis of the respiratory system should be brought under one head for investigations concerning the age incidence and duration of this disease.

During 1927 there were 3,030 deaths from tuberculosis of the respiratory system, which compares favourably with the average of 3,076 for the preceding four years. The 3,030 deaths in 1927 represented a rate of 49 per 100,000 persons. Of these deaths, 1,794 were males and 1,236 females.

(xiv) *Tuberculosis of the Meninges.* The number of deaths ascribed to this cause in 1927 was 179, which is slightly higher than the average number for the preceding four years.

(xv) *Other Forms of Tuberculosis.* The deaths in 1927 include the following:—Tuberculosis of the intestines and peritoneum, 42; tuberculosis of the spinal column, 47; tuberculosis of the joints, 13; tuberculosis of other organs, 48; acute disseminated tuberculosis, 45; and chronic disseminated tuberculosis, 37.

(xv*a*) *All Forms of Tuberculosis.*—(*a*) *General.* The total number of deaths in 1927 was 3,441, viz., 2,029 males and 1,412 females.

(*b*) *Ages at Death.* The following table shows the ages of these 3,441 persons :—

TUBERCULAR DISEASES.—DEATHS IN AGE-GROUPS, AUSTRALIA, 1927.

Ages.	Male.	Female.	Total.	Ages.	Male.	Female.	Total.
Under 5 years ..	76	78	154	55 years and under 60	173	52	225
5 years and under 10	29	13	42	60 „ „ 65	131	45	176
10 „ „ 15	15	17	32	65 „ „ 70	98	44	142
15 „ „ 20	60	126	186	70 „ „ 75	39	20	59
20 „ „ 25	126	202	328	75 „ „ 80	19	6	25
25 „ „ 30	173	215	388	80 „ over ..	10	5	15
30 „ „ 35	205	186	391				
35 „ „ 40	218	154	372	Unspecified ..	5	..	5
40 „ „ 45	221	113	334				
45 „ „ 50	224	70	294				
50 „ „ 55	207	66	273	Total ..	2,029	1,412	3,441

(*c*) *Occupations at Death, Males.* A tabulation of occupations of the males who died from tubercular diseases in 1927 is given hereunder :—

OCCUPATIONS OF MALES WHO DIED FROM TUBERCULAR DISEASES—AUSTRALIA, 1927.

Occupations.	No. of Male Deaths.	Occupations.	No. of Male Deaths.
PROFESSIONAL CLASS—		INDUSTRIAL CLASS—	
Government, Defence, Law ..	44	Art and Mechanic Productions	103
Others	62	Textiles and Fibrous Materials	32
DOMESTIC CLASS—		Food and Drinks	28
Board and Lodging	41	Animal and Vegetable Substances	13
Others	28	Metals and Minerals ..	48
COMMERCIAL CLASS—		Fuel, Light and Energy ..	23
Property and Finance ..	19	Building and Construction ..	104
Art, Mechanic and Textile Products	15	Others	397
Food and Drinks	42	AGRICULTURAL, PASTORAL, MINING, ETC., CLASS—	
Animal and Vegetable Substances	5	Agricultural	135
Fuel, Light and Metal ..	1	Pastoral	36
Merchants and Dealers ..	42	Mining and Quarrying ..	171
Others	169	Others	19
TRANSPORT AND COMMUNICATION CLASS—		INDEPENDENT MEANS ..	20
Railway Traffic	57	DEPENDENTS	150
Road and Tramway Traffic ..	65	OCCUPATION NOT STATED ..	86
Sea and River Traffic ..	53		
Others	21	TOTAL MALE DEATHS ..	2,029

(*d*) *Length of Residence in Australia.* The length of residence in Australia of persons who died from tubercular diseases in 1927 is given in the next table.

LENGTH OF RESIDENCE IN AUSTRALIA OF PERSONS WHO DIED FROM TUBERCULAR DISEASES, 1927.

Length of Residence in Australia.	Male.	Fem.	Total.	Length of Residence in Australia.	Male.	Fem.	Total.
Born in Australia ..	1,488	1,217	2,705	Resident 10 years & under 15	52	26	78
Resident under 1 year ..	10	1	11	„ 15 „ „ 20	63	29	92
„ 1 year ..	15	5	20	„ 20 „ over ..	231	64	295
„ 2 years ..	18	6	24	Length of residence not stated	94	18	112
„ 3 „ ..	14	11	25				
„ 4 „ ..	7	7	14				
„ 5 „ and under 10	37	28	65	Total Deaths ..	2,029	1,412	3,441

(*e*) *Death Rates.* The preceding table and the table on page 973 show that, among persons who have lived less than five years in Australia, 755 deaths occurred, and of these 94, or 12.5 per cent., were due to tubercular diseases.

In order to show the prevalence of tuberculosis in the several States, the death rates from tubercular diseases are given in the following table, together with the proportion which deaths from tuberculosis bear to 10,000 deaths from all causes :—

TUBERCULOSIS (ALL FORMS).—DEATH RATES (*a*) AND PROPORTION OF TOTAL DEATHS, 1927.

State.	Death Rates (*a*) from Tuberculosis.			Proportion per 10,000 Deaths from all Causes.		
	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	60	39	50	561	467	521
Victoria	70	59	65	674	657	666
Queensland	54	29	42	524	374	464
South Australia	64	62	63	685	730	706
Western Australia	88	38	65	861	532	737
Tasmania	61	78	69	587	855	713
Northern Territory ..	263	..	189	1,160	..	1,053
Federal Capital Territory ..	..	..	..	..	..	..
Australia	64	47	56	618	555	591

(*a*) Number of deaths from tuberculosis per 100,000 of mean population.

(*f*) *Death Rates, Various Countries.* The following comparative table for various countries shows that Australia occupies a very favourable position as regards the death rate from this disease.

TUBERCULOSIS.—DEATHS PER 100,000 PERSONS LIVING, VARIOUS COUNTRIES.

Country.	Year.	Respiratory System.	All Forms.	Country.	Year.	Respiratory System.	All Forms.
Queensland ..	1927	40	42	Germany ..	1926	84	98
Union of South Africa (Whites)	1926	43	48	Rumania ..	1926	(*a*)	99
New Zealand ..	1927	39	49	Prussia ..	1926	86	100
New South Wales	1927	44	50	Scotland ..	1927	71	100
Australia ..	**1927**	**49**	**56**	Greece ..	1922	101	117
Ontario (Canada)	1927	48	57	Quebec (Canada)	1927	100	121
South Australia..	1927	56	63	Sweden ..	1926	(*a*)	132
Victoria ..	1927	55	65	Switzerland ..	1927	106	140
Western Australia	1927	60	65	Northern Ireland	1927	103	141
Ceylon ..	1927	64	69	Irish Free State	1927	115	146
Tasmania ..	1927	57	69	Spain ..	1926	120	149
Denmark ..	1926	62	81	Italy	1925	112	150
Canada (including Quebec) ..	1927	68	82	Uruguay ..	1925	132	156
New York State	1927	74	82	France ..	1926	140	164
Egypt	1927	66	85	Norway ..	1926	127	164
United States (Registration Area)	1926	76	87	Austria ..	1925	(*a*)	171
Belgium ..	1926	68	95	Japan ..	1927	139	195
Netherlands ..	1926	72	96	Czecho-Slovakia	1927	174	195
England and Wales	1927	79	97	Finland ..	1926	197	230
Great Britain and Northern Ireland	1926	77	98	Hungary ..	1926	211	242
				Chile	1926	237	254
				Bulgaria ..	1927	247	314

(*a*) Not available.

(xvi) *Cancer and other Malignant Tumours.*—(*a*) *General.* The number of deaths from cancer has increased continuously to 5,758 in 1927. Of the deaths registered 2,945 were of males, viz., 1,169 in New South Wales, 811 in Victoria, 392 in Queensland, 262 in South Australia, 200 in Western Australia, 108 in Tasmania, 2 in the Northern Territory, and 1 in the Federal Capital Territory, while 2,813 were of females, viz., 1,039 in New South Wales, 918 in Victoria, 340 in Queensland, 268 in South Australia, 138 in Western Australia, 108 in Tasmania, and 2 in the Federal Capital Territory.

(*b*) *Type and Seat of Disease.* Tables showing the type and seat of disease, in conjunction with age, and with conjugal condition, of the persons dying from cancer in 1927 will be found in Bulletin No. 45 of "Australian Demography." A summary regarding type and seat of disease for the year 1927 is given hereunder:—

DEATHS FROM CANCER.—TYPE AND SEAT OF DISEASE, AUSTRALIA, 1927.

Type of Disease.	Males.	Females	Persons.
Carcinoma ..	1,824	1,940	3,764
Cancer	448	391	839
Malignant disease ..	257	204	461
Sarcoma	153	113	266
Epithelioma ..	168	63	231
Malignant tumour	41	46	87
Rodent ulcer ..	37	22	59
Scirrhus	2	21	23
Neoplasm ..	8	8	16
Hypernephroma ..	7	5	12
Total Deaths ..	2,945	2,813	5,758

Seat of Disease.	Males.	Females	Persons.
Stomach and liver..	1,227	757	1,984
Peritoneum, intestines and rectum	467	472	939
Female genital organs ..	..	618	618
Breast	..	500	500
Buccal cavity ..	318	27	345
Skin	112	68	180
Other organs ..	821	371	1,192
Total Deaths ..	2,945	2,813	5,758

(*c*) *Ages at Death.* The ages of the 5,758 persons who died from cancer in 1927 are given in the following table, which shows that while the ages below 35 are not immune from the disease, the great majority of deaths occurred at ages from 35 upwards, the maximum being found in the age-group 65 to 70:—

DEATHS FROM CANCER.—AGES, AUSTRALIA, 1927.

Ages.	Males.	Females	Total.
Under 15 years ..	23	16	39
15 years and under 20	11	4	15
20 ,, ,, 25	8	7	15
25 ,, ,, 30	15	18	33
30 ,, ,, 35	23	44	67
35 ,, ,, 40	47	107	154
40 ,, ,, 45	96	169	265
45 ,, ,, 50	129	241	370
50 ,, ,, 55	232	291	523
55 ,, ,, 60	355	339	694

Ages.	Males.	Females	Total.
60 years and under 65	478	394	872
65 ,, ,, 70	570	442	1,012
70 ,, ,, 75	446	295	741
75 ,, ,, 80	310	223	533
80 ,, ,, 85	145	143	288
85 years and over	57	79	136
Unspecified ..	..	1	1
Total Deaths ..	2,945	2,813	5,758

(*d*) *Occupations.* A tabulation in summarized form of occupations of the males who died from cancer in 1927 is given hereunder:—

OCCUPATION OF MALES WHO DIED FROM CANCER.—AUSTRALIA, 1927.

Occupation.	No. of Male Deaths.
PROFESSIONAL CLASS—	
Government, Defence, Law ..	73
Others	76
DOMESTIC CLASS—	
Board and Lodging	49
Others	45
COMMERCIAL CLASS—	
Property and Finance ..	40
Art, Mechanic, and Textile Products	27
Food and Drinks	77
Animal and Vegetable Substances	11
Fuel, Light and Metals ..	10
Merchants and Dealers ..	72
Others	142
TRANSPORT AND COMMUNICATION CLASS—	
Railway Traffic	80
Road and Tramway Traffic ..	81
Sea and River Traffic ..	70
Others	24
INDUSTRIAL CLASS—	
Art and Mechanic Productions	125
Textiles and Fibrous Materials	53
Food and Drinks	43
Animal and Vegetable Substances	14
Metals and Minerals ..	74
Fuel, Light and Energy ..	8
Building and Construction ..	190
Others	673
AGRICULTURAL PASTORAL, MINING, ETC., CLASS—	
Agricultural	440
Pastoral	131
Mining and Quarrying ..	90
Others	23
INDEPENDENT MEANS ..	71
DEPENDENT	30
OCCUPATIONS UNSPECIFIED ..	103
TOTAL MALE DEATHS ..	2,945

(*e*) *Death Rates.* The following table shows the death rates and the proportion per 10,000 deaths from cancer in each State for the year 1927.

DEATHS FROM CANCER.—RATES(*a*) AND PROPORTIONS, 1927.

State or Territory.	Death Rates (*a*) from Cancer.			Proportion of 10,000 Total Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	97	89	93	902	1,062	971
Victoria	94	106	100	903	1,178	1,031
Queensland	83	81	82	809	1,052	906
South Australia	89	97	93	945	1,138	1,034
Western Australia	97	78	88	946	1,080	996
Tasmania	104	102	103	1,006	1,126	1,063
Northern Territory ..	66	..	47	289	..	263
Federal Capital Territory ..	22	72	41	312	1,000	577
Australia ..	93	93	93	896	1,106	988

(*a*) Number of deaths from cancer per 100,000 of mean population.

(*f*) *Comparison with Tuberculosis.* In recent years the death rate from tuberculosis has shown a tendency to decrease, while that from cancer has displayed an almost continuous increase. The table hereunder shows that for each of the years under review the death rate for cancer has been greater than that from tuberculosis, the excess varying from 27 per 100,000 persons in 1923 to 37 in 1927. During the whole period the mortality of both sexes from cancer was always greater than that from tuberculosis.

TUBERCULOSIS AND CANCER.—DEATH RATES(*a*) AUSTRALIA, 1923 TO 1927.

Year.	Death Rate (*a*) from Tuberculosis.			Death Rate (*a*) from Cancer.		
	Males.	Females.	Total.	Males.	Females.	Total.
1923	71	53	62	91	88	89
1924	71	51	61	96	91	93
1925	65	50	58	97	88	92
1926	67	50	59	97	92	94
1927	64	47	56	93	93	93

(*a*) Number of deaths per 100,000 of mean population.

(*g*) *Death Rates, Various Countries.* The following table shows the Australian death rate from cancer in comparison with that for other countries :—

CANCER.—DEATHS PER 100,000 PERSONS LIVING, VARIOUS COUNTRIES.

Country.	Year.	Rate.	Country.	Year.	Rate.
Ceylon	1927	10	United States (Registration Area) ..	1926	95
Greece	1922	17	New Zealand ..	1927	96
Egypt	1927	20	Ontario (Canada) ..	1927	100
Rumania	1926	30	Irish Free State ..	1927	105
Chile	1926	45	Czecho-Slovakia ..	1927	109
Italy	1925	57	Netherlands ..	1926	110
Bulgaria	1927	65	Prussia	1926	112
Spain	1926	67	Germany	1926	117
Japan	1927	70	Northern Ireland ..	1927	118
Union of South Africa (Whites)	1926	71	Norway	1926	119
Uruguay	1925	71	New York State ..	1927	124
Quebec (Canada) ..	1927	73	Sweden	1924	127
Canada (including Quebec)	1927	83	Great Britain and Northern Ireland	1926	136
France	1926	84	England and Wales	1927	138
Belgium	1926	85	Austria	1925	139
Hungary	1926	89	Denmark	1926	140
Australia	1927	93	Scotland	1927	141
			Switzerland ..	1927	149

The fifth issue of this Year Book contains on pages 230, *et seq.*, a paper dealing, *inter alia*, with the incidence of cancer in Australia.

(xvii) *Meningitis.* The deaths during 1927 from meningitis numbered 273, of which 122 occurred in New South Wales, 62 in Victoria, 44 in Queensland, 20 in South Australia, 16 in Western Australia, and 9 in Tasmania.

(xviii) *Cerebral Hæmorrhage, Embolism and Softening of the Brain.*—The deaths under this heading have increased in number during the period under review. The figures for 1927 are made up as follows :—Cerebral hæmorrhage and apoplexy, 1,313 males, 1,362 females ; cerebral embolism, 222 males, 279 females ; and softening of the brain, 39 males, 42 females.

(xix) *Diseases of the Heart.* The number of deaths in 1927 was 8,393, viz., 4,710 males and 3,683 females. Of the 8,393 deaths, 45 were attributed to pericarditis, 386 to acute endocarditis and myocarditis, 489 to angina pectoris, and 7,473 to other diseases of the heart. Of these deaths, New South Wales contributed 2,162 males and 1,623 females ; Victoria, 1,214 males and 1,071 females ; Queensland, 639 males and 410 females ; South Australia, 300 males and 282 females ; Western Australia, 219 males and 159 females ; Tasmania, 167 males and 135 females ; Northern Territory, 5 males and 1 female ; and Federal Capital Territory, 4 males and 2 females. The death rates and proportions per 10,000 deaths in 1927 were as follows :—

DEATH RATES (*a*) FROM DISEASES OF THE HEART AND PROPORTION OF 10,000 TOTAL DEATHS, AUSTRALIA, 1927.

State or Territory.	Death Rates (*a*) from Diseases of the Heart.			Proportion of 10,000 Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	179	139	159	1,668	1,659	1,664
Victoria	141	123	132	1,352	1,375	1,362
Queensland	136	97	118	1,319	1,269	1,299
South Australia	102	102	102	1,082	1,198	1,135
Western Australia	106	89	98	1,036	1,244	1,114
Tasmania	160	128	144	1,555	1,408	1,486
Northern Territory ..	164	84	142	724	1,429	789
Federal Capital Territory ..	87	72	81	1,250	1,000	1,154
Australia	149	122	136	1,434	1,449	1,440

(*a*) Number of deaths from diseases of the heart per 100,000 of mean population.

(xx) *Acute Bronchitis.* Deaths from bronchitis are classified under the following headings :—(*a*) Acute, (*b*) chronic, (*c*) unspecified, under five years of age, and (*d*) unspecified, five years and over. For the purpose of the abridged classification, (*a*) and (*c*) are treated as "acute," and (*b*) and (*d*) as "chronic" bronchitis. Acute bronchitis caused 351 deaths in 1923, 300 in 1924, 260 in 1925, 248 in 1926, and 344 in 1927, viz., 176 males and 168 females.

(xxi) *Chronic Bronchitis.* The deaths from this cause in 1927 numbered 790, viz., 449 males and 341 females, which was lower than the average for previous four years.

(xxii) *Pneumonia.* The deaths from pneumonia during 1927 were 2,779—1,707 males and 1,072 females —which is 13·6 per cent. higher than the average, 2,447, for the previous four years.

(xxiii) *Other Diseases of the Respiratory System.* Deaths under this heading in 1923 numbered 2,901 ; in 1924, 2,742 ; in 1925, 2,522 ; in 1926, 2,534 ; and in 1927, 2,767. The total for 1927 is made up as follows, viz. :—Diseases of the nasal fossae, 22 ; diseases of the larynx, 40 ; broncho-pneumonia, 1,647 ; capillary bronchitis, 25 ; pleurisy, 221 ; pulmonary congestion and apoplexy, 314 ; gangrene of the lungs, 20 ; asthma. 132 ; pulmonary emphysema, 16 ; chronic interstitial pneumonia, 268 ; and other diseases of the respiratory system (tuberculosis excepted), 62.

(xxiv) *Diseases of the Stomach* (*Cancer excepted*). In 1927 this heading includes ulcer of the stomach, 165 males, 61 females ; ulcer of the duodenum, 88 males, 22 females ; and other diseases of the stomach (cancer excepted), 114 males, 84 females ; a total of 534.

(xxva) *Diarrhœa and Enteritis* (*Children under two years only*). The number of deaths due to these causes was 1,330 in 1927, a decrease of 25.6 per cent. compared with the average of 1,787 for the previous four years. During 1927, 8,571 children died before reaching their second birthday, and of these, 1,330, or 15.5 per cent., died from diarrhœa and enteritis. The ages of children dying from these diseases during the first year of life will be found on page 963.

The number of deaths (under 2 years of age), the death rates, and proportions of 10,000 deaths due to diarrhœa and enteritis are given below :—

DEATHS, DEATH RATES(a), ETC., DIARRHŒA AND ENTERITIS (UNDER 2 YEARS OF AGE).—AUSTRALIA, 1927.

State.	Number of Deaths from Diarrhœa and Enteritis. (Under 2 years of age.)			Death Rates (a) from Diarrhœa and Enteritis. (Under 2 years of age.)			Proportion of 10,000 Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	278	232	510	23	20	22	214	237	224
Victoria.. ..	205	146	351	24	17	20	228	187	209
Queensland ..	150	115	265	32	27	30	310	356	328
South Australia ..	39	29	68	13	11	12	141	123	133
Western Australia	53	40	93	26	23	24	251	313	274
Tasmania ..	27	10	37	26	10	18	251	104	182
Federal Capital Territory ..	3	3	6	65	108	81	938	1,500	1,154
Australia ..	755	575	1,330	24	19	22	230	226	228

(a) Number of deaths from these diseases per 100,000 of mean population.

(xxv*b*) *Diarrhœa and Enteritis* (*2 years and over*). As in the case of infants the number of deaths from the same causes in older ages, viz., 513, compared favourably with the average of 525 for the period 1923 to 1926.

(xxvi) *Appendicitis and Typhlitis.* Deaths under this heading numbered 436 in 1923, 408 in 1924, 438 in 1925, 476 in 1926, and 483 in 1927; the total for the last year included 306 males and 177 females.

(xxvii) *Hernia, Intestinal Obstruction.* The deaths under this heading have not varied greatly from year to year, the number registered in 1927 being 517, viz., hernia, 124, and intestinal obstruction, 393.

(xxviii) *Cirrhosis of the Liver.* The deaths from this cause during 1927 numbered 321, and include 36 deaths from alcoholic cirrhosis.

(xxix) *Acute and Chronic Nephritis.* The number of deaths attributable to these diseases shows a considerable increase on the number for 1923. In 1923 there were 2,460 deaths; in 1924, 2,893; in 1925, 2,978; in 1926, 2,989, and in 1927, 3,098, viz.: 1,733 males and 1,365 females. Of the deaths registered in 1927, 161 were ascribed to acute nephritis, and 2,937 to chronic nephritis, of which 1,140 deaths occurred in New South Wales; 954 in Victoria; 497 in Queensland; 267 in South Australia; 152 in Western Australia, 85 in Tasmania; 1 Northern Territory; and 2 Federal Capital Territory.

(xxx) *Non-Cancerous Tumours and other Diseases of the Female Genital Organs.* Deaths in 1923 numbered 174; in 1924, 199; in 1925, 165; in 1926, 166; and in 1927, 179. Included in the 179 deaths in 1927 were the following :—Cysts, etc., of the ovary, 29; salpingitis and pelvic abscess, 66; benign tumours of the uterus, 47; uterine hæmorrhage (non-puerperal), 4; and other diseases of the female genital organs, 33.

(xxxi) *Puerperal Septicæmia* (*Puerperal Fever*). The 288 deaths from puerperal septicæmia during 1927 showed a considerable increase over the previous four years, being 2.15 to every 1,000 live births. The corresponding rates during the preceding five years were :—1922, 1.43; 1923, 1.72; 1924, 1.96; 1925, 1.74; and 1926, 1.64. The following table shows the death rate per 1,000 live births from puerperal causes in various countries.

CHILDBIRTH.—DEATHS PER 1,000 LIVE BIRTHS, VARIOUS COUNTRIES.

Country.	Year.	Rates per 1,000 Live Births from—		
		Puerperal Sepsis.	Other Puerperal Causes.	All Puerperal Causes.
Sweden	1924	0.91	1.48	2.39
Uruguay	1925	1.54	1.00	2.54
Denmark	1926	1.06	1.58	2.64
Italy	1925	0.99	1.73	2.72
Japan	1927	0.93	1.86	2.79
Netherlands	1926	0.90	1.93	2.83
Norway	1926	0.83	2.18	3.01
Finland	1926	(a)	(a)	3.20
Hungary	1926	1.60	1.60	3.20
Czecho-Slovakia	1927	1.97	1.60	3.57
Switzerland	1927	1.62	2.03	3.65
Spain	1926	2.14	1.64	3.78
Egypt	1927	1.52	2.28	3.80
England and Wales	1927	1.57	2.54	4.11
Great Britain and Northern Ireland	1926	1.61	2.84	4.45
Irish Free State	1927	1.28	3.23	4.51
Union of South Africa (Whites)	1926	2.01	2.55	4.56
South Australia	1927	1.48	3.31	4.79
Northern Ireland	1927	1.80	3.00	4.80
Quebec (Canada)	1927	1.82	3.03	4.85
New Zealand	1927	2.51	2.40	4.91
France	1926	2.00	3.00	5.00
Rumania	1926	2.08	3.08	5.16
Prussia	1926	2.77	2.61	5.38
Canada (including Quebec)	1927	1.92	3.62	5.54
Victoria	1927	2.22	3.37	5.59
Tasmania	1927	2.07	3.52	5.59
Queensland	1927	1.26	4.34	5.60
New York State	1927	1.60	4.11	5.71
Chile	1926	1.87	4.26	5.83
Western Australia	1927	2.12	3.77	5.89
Belgium	1926	3.01	2.89	5.90
Australia	**1927**	**2.15**	**3.77**	**5.92**
Ontario (Canada)	1927	2.11	3.82	5.93
Bulgaria	1927	2.80	3.50	6.30
Scotland	1927	1.90	4.53	6.43
New South Wales	1927	2.58	3.96	6.54
Germany	1926	2.54	4.06	6.60
Greece	1922	3.57	3.64	7.21
United States (Registration Area)	1925	3.03	5.12	8.15
Ceylon	1927	6.48	11.02	17.50

(a) Not available.

(xxxii*a*) *Other Puerperal Accidents of Pregnancy and Confinement.* The deaths under this heading in 1923 numbered 458; in 1924, 473; in 1925, 530; 488 in 1926; and 504 in 1927. Included in the 504 deaths in 1927 were the following:—Accidents of pregnancy, 107; puerperal hæmorrhage, 86; other accidents of childbirth, 76; puerperal phlegmasia alba dolens, embolus, sudden death, 54; puerperal albuminuria and convulsions, 170; deaths following childbirth, 8, and 3 deaths from puerperal diseases of the breast.

(xxxii*b*) *All Puerperal Causes.* The 792 deaths in 1927 under the two preceding headings correspond to a death rate of 26 per 100,000 females. It may be expressed in other terms by stating that 1 of every 167 women confined in 1927 died from puerperal causes. The corresponding ratios for married women were 1 of every 175, and for single women 1 of every 88. More detailed information will be found in a series of tables in Bulletin No. 45 "Australian Demography."

The ages of the mothers who died varied from 16 to 48 years as shown hereunder :—

DEATHS FROM PUERPERAL CAUSES.—AGES OF MOTHERS, AUSTRALIA, 1927.

Age at Death.	Married Women.	Single Women.	Total.	Age at Death.	Married Women.	Single Women.	Total.
16 years ..	..	1	1	34 years ..	29	3	32
17 ,, ..	4	2	6	35 ,, ..	38	..	38
18 ,, ..	5	4	9	36 ,, ..	32	2	34
19 ,, ..	22	7	29	37 ,, ..	24	..	24
20 ,, ..	14	1	15	38 ,, ..	25	2	27
21 ,, ..	18	8	26	39 ,, ..	38	3	41
22 ,, ..	22	7	29	40 ,, ..	25	..	25
23 ,, ..	35	6	41	41 ,, ..	13	..	13
24 ,, ..	28	2	30	42 ,, ..	7	..	7
25 ,, ..	36	6	42	43 ,, ..	12	..	12
26 ,, ..	35	4	39	44 ,, ..	7	..	7
27 ,, ..	40	4	44	45 ,, ..	3	..	3
28 ,, ..	36	2	38	46 ,, ..	1	..	1
29 ,, ..	30	1	31	47 ,, ..	1	..	1
30 ,, ..	31	4	35	48 ,, ..	1	..	1
31 ,, ..	36	..	36				
32 ,, ..	33	2	35	Total Deaths	721	71	792
33 ,, ..	40	..	40				

The total number of children left by the married mothers was 1,888, an average of 2.6 children per mother.

Forty-five of the mothers who died had been married less than one year, 112 between one and two years, and 72 between two and three years. The duration of marriage ranged up to 27 years, apart from 9 cases in which the date of marriage was not stated. A tabulation, distinguishing the ages at marriage, will be found in Bulletin No. 45 "Australian Demography," which also includes a table, showing in combination the duration of marriage and previous issue.

(xxxiii) *Congenital Malformation, Debility, and Premature Birth.* The deaths under this heading in 1927 numbered 3,784, of which 3,697 were of children under one year of age. Of the deaths of children under one year of age 51 per cent. were due to those causes. The number of deaths for 1927 is given in the following table :—

DEATHS FROM CONGENITAL DEBILITY, ETC., AND MALFORMATION, 1927.

State or Territory.	Congenital Malformation.			Congenital Debility, Icterus, Sclerema.			Premature Birth, and Injury at Birth.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	156	123	279	138	105	243	533	429	962
Victoria ..	118	79	197	134	83	217	364	274	638
Queensland ..	65	43	108	67	45	112	193	152	345
South Australia	43	29	72	41	25	66	100	88	188
Western Australia	23	17	40	25	19	44	62	57	119
Tasmania ..	9	13	22	19	6	25	57	45	102
Northern Territory	..	..	..	1	1	2	..	..	..
Fed. Cap. Territory	..	1	1	..	..	..	2	..	2
Australia ..	414	305	719	425	284	709	1,311	1,045	2,356
Number of deaths under one year per 1,000 births	5.31	4.10	4.73	6.17	4.38	5.30	19.04	16.02	17.62

(xxxiv) *Senility.* In 1927, 3,623 deaths were attributed to this cause, as follows :—1,042 occurred in New South Wales, viz., 587 males and 455 females ; 1,138 in Victoria, viz., 489 males and 649 females ; 579 in Queensland, viz., 349 males and 230 females; 444 in South Australia, viz., 210 males and 234 females; 234 in Western Australia, viz., 139 males and 95 females; 172 in Tasmania, viz., 75 males and 97 females; 13 males in the Northern Territory; and 1 female in the Federal Capital Territory.

Of the deaths described as due to senility, 7 males and 11 females were stated to be aged 100 years or over.

(xxxv*a*) *Violent Deaths, Homicides.* Deaths from homicide in 1927 numbered 110, this figure being slightly higher than the average for the previous four years.

(xxxv*b*) *Other Accidental Deaths.* Deaths from accidents in 1927 numbered 3,520, compared with an average of 2,985 for the previous four years. Of the deaths in 1927, 1,429 occurred in New South Wales; 844 in Victoria; 496 in Queensland; 370 in South Australia; 265 in Western Australia; 86 in Tasmania; 19 in Northern Territory; and 11 in the Federal Capital Territory.

The following table shows the various kinds of violent deaths, including homicides, recorded in Australia for the year 1927:—

DEATHS FROM EXTERNAL VIOLENCE.—AUSTRALIA, 1927.

Cause of Death.	Males.	Females.	Persons.
Poisoning by food	6	5	11
Poisoning by venomous animals	10	2	12
Other acute accidental poisonings (gas excepted) ..	28	21	49
Conflagration	14	10	24
Accidental burns (conflagration excepted) ..	150	135	285
Accidental mechanical suffocation	31	14	45
Accidental absorption of irrespirable or poisonous gas	20	13	33
Accidental drowning	497	93	590
Accidental injury by firearms	89	6	95
Accidental injury by cutting or piercing instruments	6	2	8
Accidental injury by fall	381	125	506
Accidental injury in mining or quarrying ..	85	..	85
Accidental injury by machinery	48	..	48
Accidental injury by other crushing—			
Railway accidents	160	27	187
Tramway accidents	43	10	53
Automobile accidents	597	151	748
Injuries by other vehicles	167	19	186
Aeroplane accidents	10	1	11
Other crushings	131	24	155
Injuries by animals (not poisoning)	21	3	24
Wounds of war	13	..	13
Starvation, thirst, fatigue	17	..	17
Excessive cold	9	..	9
Excessive heat	73	66	139
Lightning	8	..	8
Other accidental electric shocks	44	2	46
Homicide by firearms	18	17	35
Homicide by cutting or piercing instruments ..	8	8	16
Homicide by other means	28	13	41
Infanticide (murder of children under 1 year) ..	10	8	18
Fractures (cause not specified)	6	9	15
Other external violence (cause specified)	87	21	108
Other external violence (cause unspecified) ..	7	3	10
Total Deaths	2,822	808	3,630
Death Rate per 100,000 of mean population	89	27	59

(xxxvi) *Suicide.* (*a*) *General.* Deaths by suicide in 1927 showed an increase on the figures for each of the previous four years, the number in 1923 being 599, viz., 492 males and 107 females; in 1924, 653, viz., 534 males and 119 females; in 1925, 700, viz., 569 males and 131 females; in 1926, 711, viz., 583 males and 128 females; and in 1927, 740, viz., 598 males and 142 females.

(*b*) *Modes Adopted.* The modes adopted by persons who committed suicide in the years 1923 to 1927 were as follows :—

SUICIDES, MODES ADOPTED.—AUSTRALIA, 1923 TO 1927.

Mode of Death.	Males.		Females.		Persons.	
	Total of 4 years, 1923–26.	1927.	Total of 4 years, 1923–26.	1927.	Total of 4 years, 1923–26.	1927.
Poisoning	462	141	188	71	650	212
Poisonous gas	37	13	23	3	60	16
Hanging or Strangulation ..	322	92	76	23	398	115
Drowning	193	40	84	16	277	56
Firearms	649	189	29	11	678	200
Cutting or piercing instruments	402	94	49	9	451	103
Jumping from a high place ..	32	7	10	3	42	10
Crushing	45	13	14	4	59	17
Other Modes	36	9	12	2	48	11
Total	2,178	598	485	142	2,663	740

(*c*) *Death Rates.* The death rates from suicide and the proportion per 10,000 of total deaths are given in the following table :—

SUICIDE.—DEATHS, DEATH RATES(*a*), AND PROPORTION OF TOTAL DEATHS, 1927.

State or Territory.	Number of Deaths.			Death Rates (*a*) from Suicide.			Proportion of 10,000 Total Deaths.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	209	53	262	17	5	11	161	54	115
Victoria.. ..	150	37	187	18	4	11	167	48	112
Queensland ..	108	22	130	23	5	15	223	68	161
South Australia ..	51	9	60	17	3	11	184	38	117
Western Australia	63	15	78	30	8	20	298	117	230
Tasmania ..	17	6	23	16	6	11	158	63	113
Northern Territory	..	..	..	..	..	..	..	..	..
Fed. Cap. Territory	..	..	..	..	..	..	..	..	..
Australia ..	598	142	740	19	5	12	182	56	127

(*a*) Number of deaths from suicide per 100,000 of mean population.

(*d*) *Ages.* From the following table, which shows the ages of the persons who committed suicide in 1927, it will be seen that both extreme youth and extreme old age are represented :—

AGES OF PERSONS WHO COMMITTED SUICIDE.—AUSTRALIA, 1927.

Ages.	M.	F.	Total.	Ages.	M.	F.	Total.
15 years and under 20	6	16	22	60 years and under 65	50	8	58
20 ,, ,, 25	36	11	47	65 ,, ,, 70	38	6	44
25 ,, ,, 30	40	11	51	70 ,, ,, 75	18	3	21
30 ,, ,, 35	50	18	68	75 ,, ,, 80	11	3	14
35 ,, ,, 40	56	14	70	80 ,, ,, 85	6	..	6
40 ,, ,, 45	65	14	79	85 ,, ,, 90	1	..	1
45 ,, ,, 50	73	20	93	Not stated ..	4	..	4
50 ,, ,, 55	70	11	81				
55 ,, ,, 60	74	7	81	Total Deaths ..	598	142	740

(*e*) *Occupations of Males.* The next table gives the occupations of the males who committed suicide in 1927 :—

OCCUPATIONS OF MALES WHO COMMITTED SUICIDE.—AUSTRALIA, 1927.

Occupation.	Deaths.	Occupation.	Deaths.
PROFESSIONAL CLASS—		INDUSTRIAL CLASS—	
Government, Defence, Law	11	Art and Mechanic Productions	27
Others	16	Textiles and Fibrous Materials	7
DOMESTIC CLASS—		Food and Drinks	8
Board and Lodging	14	Animal and Vegetable Substances	2
Others	4	Metals and Minerals	12
COMMERCIAL CLASS—		Fuel, Light and Energy	2
Property and Finance	7	Building and Construction	28
Art, Mechanic and Textile Products	4	Others	170
Food and Drinks	13	AGRICULTURAL, PASTORAL MINING, ETC., CLASS—	
Animal and Vegetable Substances	2	Agricultural	78
Fuel, Light, and Energy	1	Pastoral	23
Merchants and Dealers	18	Mining and Quarrying	23
Others	35	Others	9
TRANSPORT AND COMMUNICATION CLASS—		INDEPENDENT MEANS	9
Railways	8	DEPENDENTS	1
Roads and Trams	12	OCCUPATION NOT STATED	29
Sea and Rivers	16	Total	598
Others	9		

(*f*) *Death Rates, Various Countries.*—The following comparative table for various countries shows that Australia occupies a very favourable position as regards the death rate from suicide.

SUICIDE.—DEATHS PER 100,000 PERSONS LIVING, VARIOUS COUNTRIES.

Country.	Year.	Rate.	Country.	Year.	Rate.
Irish Free State	1927	3.2	England and Wales	1927	12.5
Egypt	1927	3.2	United States	1926	12.8
Quebec (Canada)	1927	3.3	Sweden	1924	14.5
Spain	1926	3.8	New Zealand	1927	14.5
Ceylon	1927	5.0	Queensland	1927	14.6
Norway	1926	6.3	Finland	1926	14.8
Northern Ireland	1927	6.4	Belgium	1926	15.2
Netherlands	1926	6.5	Bulgaria	1927	15.8
Rumania	1926	7.8	New York State	1927	16.0
Canada	1927	8.0	Denmark	1926	16.2
Italy	1926	9.5	France	1926	19.0
Ontario (Canada)	1927	9.9	Western Australia	1927	20.3
Scotland	1927	10.0	Japan	1927	20.9
South Australia	1927	10.5	Switzerland	1927	24.3
Victoria	1927	10.8	Germany	1925	24.4
New South Wales	1927	11.0	Prussia	1926	25.4
Tasmania	1927	11.0	Czecho-Slovakia	1927	25.6
Union of South Africa(*a*)	1926	11.5	Hungary	1926	30.2
Australia	**1927**	**12.0**			

(*a*) White population only.

(*g*) *Frequency.* The rates show a fairly general increase from 99.07 per million during the years 1871–75 to a maximum of 131.17 per million for the period 1911–15, after which there was a decline, the rate in 1927 standing at 119.94.

SUICIDES.—AUSTRALIA, 1871–75 TO 1927.

Period.	Number of Suicides.			Suicides per One Million of Persons Living. Average Annual Rate.			Suicides of Females to 100 Suicides of Males. Based on—	
	Males.	Females.	Persons.	Males.	Females.	Persons.	Absolute Figures.	Rates.
1871–75 ..	715	150	865	150.94	37.56	99.07	20.98	24.88
1876–80 ..	878	145	1,023	159.69	31.06	100.62	16.51	19.45
1881–85 ..	999	183	1,182	152.58	32.90	97.61	18.32	21.56
1886–90 ..	1,394	292	(*a*) 1,686	179.20	43.97	(*c*) 116.92	20.95	24.54
1891–95 ..	1,574	337	(*b*) 1,911	181.34	44.09	(*d*) 117.07	21.41	24.31
1896–1900	1,838	410	2,248	191.11	47.88	123.65	22.31	25.05
1901–05 ..	2,054	380	2,434	201.78	40.88	124.98	18.50	20.26
1906–10 ..	2,031	437	2,468	186.11	43.22	117.39	21.51	23.22
1911–15 ..	2,546	577	3,123	206.15	50.36	131.17	22.66	24.43
1916–20 ..	2,238	521	2,759	175.46	40.93	108.27	23.28	23.33
1921 ..	510	111	621	183.89	41.33	113.76	21.76	22.47
1922 ..	441	92	533	155.78	33.61	95.72	20.86	21.58
1923 ..	492	107	599	169.81	38.33	105.29	21.75	22.57
1924 ..	534	119	653	180.36	41.81	112.46	22.28	23.18
1925 ..	569	131	700	187.89	45.13	118.02	23.02	24.02
1926 ..	583	128	711	188.72	43.27	117.58	21.96	22.93
1927 ..	598	142	740	189.54	47.10	119.94	23.75	24.85

(*a*) 1,705 inclusive of Western Australian figures.
(*b*) 1,984 inclusive of Western Australian figures.
(*c*) 116.49 inclusive of Western Australian figures.
(*d*) 119.11 inclusive of Western Australian figures.

(xxxvii) *Other Diseases.* The number of causes included under this heading is very large, amounting to no less than 81 of the items shown in the detailed classification, and deaths were recorded under each of these with the exception of the following seven causes :—Glanders, anthrax, rabies, soft chancre, gonococcus infection, other diseases of digestive system, and chyluria. The total number of deaths under "other diseases" in 1923 was 8,203, viz., 4,712 males and 3,491 females; in 1924, 8,400, viz., 4,821 males and 3,579 females; in 1925, 7,924, viz., 4,640 males and 3,284 females; in 1926, 8,133, viz., 4,643 males and 3,490 females; and in 1927, 8,389, viz., 4,657 males and 3,732 females. Some of the diseases included here account for very considerable numbers of deaths. Particulars for 1927 are shown in the following table :—

DEATHS FROM "OTHER DISEASES."—AUSTRALIA, 1927.

Causes.	M.	F.	Total.
Tetanus	54	13	67
Mycoses	9	3	12
Syphilis	92	42	134
Purulent Infection and Septicæmia	70	59	129
Other Infectious Diseases	1	..	1
Other Tumours (Tumours of the female genital organs excepted)	45	57	102
Acute Rheumatic Fever	124	127	251
Chronic Rheumatism and Gout	63	90	153
Scurvy	1	2	3
Pellagra	..	1	1
Beri-beri	6	..	6
Rickets	3	6	9
Diabetes	295	511	806
Anæmia, Chlorosis	151	240	391
Diseases of the Pituitary Gland	4	6	10
Exophthalmic Goitre	14	103	117
Other Diseases of the Thyroid Glands	7	41	48
Diseases of the Parathyroid Glands	4	2	6
Diseases of the Thymus Gland	15	4	19
Addison's Disease	13	14	27
Diseases of the Spleen	9	2	11
Leucæmia	59	48	107
Hodgkin's Disease	50	18	68
Acute and Chronic Alcoholism	76	24	100
Chronic Lead Poisoning	23	2	25
Chronic Organic Poisonings	4	..	4
Other General Diseases	67	46	113
Encephalitis	54	42	96
Locomotor Ataxia	51	10	61
Other Diseases of the Spinal Cord	117	64	181
Paralysis without specified cause	182	175	357
General Paralysis of the Insane	136	27	163
Other Forms of Mental Alienation	25	53	78
Epilepsy	100	89	189
Convulsions (non-puerperal)	3	..	3
Convulsions of Children under 5 years of age	87	63	150
Chorea	1	3	4
Neuralgia and Neuritis	8	17	25
Other Diseases of the Nervous System	225	216	441
Diseases of the Eye	1	4	5
Diseases of the Ear	70	33	103
Diseases of the Arteries, Aneurism, Atheroma	675	358	1,033
Embolism and Thrombosis (not cerebral)	78	72	150
Diseases of the Veins	14	13	27
Diseases of the Lymphatic System	11	7	18
Hæmorrhage (without specified cause)	6	5	11
Other Diseases of the Circulatory System	5	17	22
Diseases of the Mouth and its Associated Organs	20	22	42
Diseases of the Pharynx	35	33	68
Diseases of the Œsophagus	8	5	13
Ankylostomiasis	2	1	3
Intestinal Parasites	11	6	17
Other Diseases of the Intestines	39	25	64
Acute Yellow Atrophy of the Liver	3	24	27
Hydatid Tumours of the Liver	21	13	34
Biliary Calculi	42	108	150
Other Diseases of the Liver	106	149	255
Diseases of the Pancreas	21	34	55
Peritonitis (without specified cause)	60	59	119
Other Diseases of the Kidneys and their Adnexa	146	124	270
Calculi of Urinary Passages	50	18	68
Diseases of the Bladder	99	21	120
Other Diseases of the Urethra Urinary Abscesses, etc.	32	3	35
Diseases of the Prostate	380	..	380
Non-venereal Diseases of the Male Genital Organs	6	..	6
Non-puerperal Diseases of the Breast	..	2	2
Gangrene	42	59	101
Furuncle	30	13	43
Phlegmon, Acute Abscess	73	45	118
Other Diseases of the Skin and Adnexa	22	24	46
Non-tuberculous Diseases of the Bones	77	44	121
Other Diseases of the Joints (Tuberculosis and Rheumatism excepted)	16	9	25
Amputation	1	..	1
Other Diseases of the Organs of Locomotion	1	..	1
Other Diseases peculiar to Infancy	205	158	363
Lack of Care (Infants)	1	4	5
Total Deaths	4,657	3,732	8,389

(xxxviii) *Unspecified or Ill-defined Diseases.* The number of deaths included under this heading was 691 in 1923, 735 in 1924, 648 in 1925, 690 in 1926, and 570 in 1927, of which 370 were males and 200 females. The detailed classification shows these ill-defined diseases under two headings—sudden death, including syncope; and unspecified or ill-defined causes, of which the following are specimens:—Heart failure, asthenia, anasarca, atrophy, exhaustion, dropsy, ascites, and general œdema, etc. In 1927, the number of deaths which came under the first of these categories was 59, and under the second, 511. It is inevitable that cases will occur regarding which the available information is insufficient to permit of a clear definition of the fatal disease in the certificate of death. In the majority of cases, however, there is little doubt that more satisfactory certificates might have been given.

16. Causes of Deaths in Classes.—The figures in the preceding sub-sections relate to specific causes of death, and are of greater value in medical statistics than a mere grouping under general headings. The classification under fifteen general headings adopted by the compilers of the International Nomenclature is, however, shown in the following table, together with the death rates and proportions on total deaths pertaining to those classes :—

DEATHS, DEATH RATES (*a*), ETC., IN CLASSES.—AUSTRALIA, 1927.

Class.	Total Deaths.			Death Rates. (*a*)			Proportion of 10,000 Deaths.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
1. Epidemic, Endemic, and Infectious Diseases	3,284	2,477	5,761	104	81	94	1,000	974	989
2. General diseases not included above	3,978	4,157	8,135	126	138	132	1,211	1,635	1,396
3. Diseases of the Nervous System and of the Organs of Sense ..	2,796	2,590	5,386	89	86	87	851	1,019	924
4. Diseases of the Circulatory System	5,499	4,155	9,654	174	138	156	1,671	1,634	1,656
5. Diseases of the Respiratory System	3,996	2,684	6,680	126	89	108	1,216	1,056	1,146
6. Diseases of the Digestive Organs	2,589	1,956	4,545	82	65	74	788	769	780
7. Diseases of the Genito-Urinary System and Adnexa	2,446	1,712	4,158	78	57	67	745	673	713
8. Puerperal Condition	..	792	792	..	26	13	..	311	136
9. Diseases of the Skin and of the Cellular Tissue	167	141	308	5	5	5	51	55	53
10. Diseases of the Bones and Organs of Locomotion	95	53	148	3	2	2	29	21	25
11. Malformations	414	305	719	13	10	12	126	120	123
12. Early Infancy..	1,942	1,491	3,433	62	49	56	591	587	589
13. Old Age	1,862	1,761	3,623	59	58	59	567	693	622
14. External Causes	3,420	950	4,370	108	32	71	1,041	374	750
15. Ill-defined Diseases	370	200	570	12	7	9	113	79	98
Total	32,858	25,424	58,282	1,041	843	945	10,000	10,000	10,000

(*a*) Number of deaths per 100,000 of mean population.

17. **Ages at Death of Married Males and Females, and Issue.**—Bulletin No. 45 "Australian Demography" contains a number of tables showing the age at marriage, age at death, duration of life after marriage, birthplaces, and occupations, in combination with the issue of married persons who died in Australia in 1927. A summary of those tables is given hereunder. Deaths of married males in 1927 numbered 18,261, and of married females, 16,717. The tabulations which follow deal, however, with only 17,758 males and 16,316 females, the information in the remaining 904 cases being incomplete. The total number of children in the families of the 17,758 males was 81,668, and of the 16,316 females, 79,336. The average number of children is shown for various age-groups in the following table :—

AGES AT DEATH OF MARRIED MALES AND FEMALES, AND AVERAGE ISSUE.—AUSTRALIA, 1927.

Age at Death.	Average Family of Males.	Average Family of Females.	Age at Death.	Average Family of Males.	Average Family of Females.
Under 20 years ..	0.66	0.76	70 to 74 years ..	5.48	5.83
20 to 24 years ..	0.90	1.08	75 ,, 79 ,, ..	5.92	6.40
25 ,, 29 ,, ..	1.42	1.64	80 ,, 84 ,, ..	6.38	6.55
30 ,, 34 ,, ..	1.83	2.30	85 ,, 89 ,, ..	6.63	6.59
35 ,, 39 ,, ..	2.43	3.03	90 ,, 94 ,, ..	6.75	6.88
40 ,, 44 ,, ..	3.02	3.36	95 ,, 99 ,, ..	7.41	5.80
45 ,, 49 ,, ..	3.27	3.61	100 years and upwards ..	5.78	7.10
50 ,, 54 ,, ..	3.62	3.75			
55 ,, 59 ,, ..	3.80	4.29			
60 ,, 64 ,, ..	4.41	4.68			
65 ,, 69 ,, ..	4.88	5.31	All ages ..	4.60	4.86

The figures in the preceding table include the issue both living and dead, the proportion between them, taking the issue of deceased males and females together, being about 1,000 to 274. The totals are shown in the following table :—

ISSUE OF MARRIED MALES AND FEMALES.—AUSTRALIA, 1927.

Issue of Married Males.	Males.	Females.	Total.	Issue of Married Females.	Males.	Females.	Total.
Living ..	32,763	33,083	65,846	Living ..	30,106	30,420	60,526
Dead ..	9,053	6,769	15,822	Dead ..	10,555	8,255	18,810
Total ..	41,816	39,852	81,668	Total ..	40,661	38,675	79,336

18. **Ages at Marriage of Deceased Males and Females, and Issue.**—While the table giving the average families of married males and females naturally shows an increase in the averages with advancing ages at death, the following table, which gives the average families of males and females according to the age at marriage of the deceased parents, shows a corresponding decrease in the averages as the age at marriage advances :—

AGES AT MARRIAGE OF DECEASED MALES AND FEMALES, AND AVERAGE ISSUE.—AUSTRALIA, 1927.

Age at Marriage.	Average Family of Males.	Average Family of Females.	Age at Marriage.	Average Family of Males.	Average Family of Females.
Under 15 years ..	..	7.50	50 to 54 years ..	1.28	..
15 to 19 ,, ..	6.10	6.88	55 ,, 59 ,, ..	0.84	..
20 ,, 24 ,, ..	5.67	5.32	60 ,, 64 ,, ..	0.76	..
25 ,, 29 ,, ..	4.85	3.88	65 years and upwards	0.31	..
30 ,, 34 ,, ..	4.00	2.47	Age unspecified ..	4.50	5.19
35 ,, 39 ,, ..	3.27	1.45			
40 ,, 44 ,, ..	2.53	0.42			
45 ,, 49 ,, ..	1.92	0.07	All ages ..	4.60	4.86

19. **Duration of Life after Marriage of Males and Females.**—The duration of life after marriage has been tabulated for males and females both in combination with the age at marriage, and with the total and average issue. The tables containing the results do not, however, lend themselves to condensation, and are, therefore, omitted here. They will be found in Bulletin No. 45 of "Australian Demography."

20. **Birthplaces of Deceased Married Males and Females, and Issue.**—The following table shows the birthplaces of married males and females who died in 1927, together with their average issue. No generalizations can, of course, be made in those cases in which the number of deaths was small, but where the figures are comparatively large, as in the case of natives of Australia, differences occur between the averages of the individual States, which appear inexplicable on any other ground than that of different age constitution of the locally born population of the various States due to the different dates of the foundation of settlement. Thus, New South Wales and Tasmania, owing to their early settlement, contain a larger number of locally-born inhabitants of advanced ages than Victoria and Queensland, in which colonization was begun almost fifty years after the foundation of New South Wales. It will be noted that the differences occur both in the male and female averages.

BIRTHPLACES OF DECEASED MARRIED MALES AND FEMALES, AND AVERAGE ISSUE.—AUSTRALIA, 1927.

Birthplace.	Married Males.		Married Females.	
	Deaths.	Average Family.	Deaths.	Average Family.
New South Wales ..	3,814	4.68	3,811	4.82
Victoria	3,429	3.97	3,231	4.05
Queensland ..	711	3.90	725	4.08
South Australia ..	1,237	4.58	1,164	4.90
Western Australia ..	140	4.97	197	4.73
Tasmania	663	4.96	732	5.09
Northern Territory	1	7.00	2	1.00
Federal Capital Territory	3	5.33	4	7.75
New Zealand ..	171	3.57	112	4.03
England and Wales	4,171	4.79	3,318	5.23
Scotland	1,036	4.89	904	5.51
Ireland	1,162	5.46	1,476	5.48
Other British Possessions in Europe ..	26	4.35	26	5.69
Denmark	77	4.23	28	6.00
France	30	4.23	18	3.61
Germany	349	6.16	237	7.24
Italy	78	3.77	28	3.32
Norway	42	4.12	6	4.67
Poland	23	5.44	15	5.33
Russia	21	4.19	16	4.51
Sweden	66	4.56	15	3.80
Other European Countries	110	3.82	23	4.60
British India and Ceylon ..	41	3.66	27	5.67
China	68	3.40	4	6.50
Syria	23	4.48	10	4.60
Other Asiatic Countries	14	3.00	2	6.00
Union of South Africa	12	6.25	15	4.53
Other African Countries	9	4.89	9	5.22
Canada	27	4.48	15	4.27
United States ..	44	4.43	32	4.44
Other American Countries ..	25	3.56	10	5.90
Polynesian Islands	15	2.67	9	4.33
At Sea	58	5.28	62	5.56
Unspecified ..	62	3.71	33	3.76
Total ..	17,758	4.60	16,316	4.86

21. **Occupations of Deceased Married Males, and Issue.**—The following tabulation shows the average issue in combination with the occupation of deceased males.

OCCUPATIONS OF DECEASED MARRIED MALES AND AVERAGE ISSUE.—AUSTRALIA, 1927.

Occupation.	Deaths of Married Males.	Average Family.
PROFESSIONAL CLASS—		
Government, Defence, and Law	486	4.05
Others	608	3.72
DOMESTIC CLASS—		
Board and Lodging ..	302	3.25
Others	267	4.00
COMMERCIAL CLASS—		
Property and Finance ..	271	4.07
Art, Mechanic and Textile Products	197	3.43
Food and Drinks ..	442	4.20
Animal and Vegetable Substances	73	4.25
Fuel, Light and Metals ..	58	3.84
Merchants and Dealers ..	515	4.10
Others	962	3.21
TRANSPORT AND COMMUNICATION CLASS—		
Railways	604	4.56
Roads and Trams ..	578	4.14
Sea and Rivers ..	403	3.57
Others	155	3.63
INDUSTRIAL CLASS—		
Art and Mechanic Products	789	4.29
Textiles and Fibrous Materials	363	4.53
Food and Drinks ..	262	4.47
Animal and Vegetable Substances	75	4.35
Metals and Minerals ..	480	4.81
Fuel, Light, and Energy ..	100	3.20
Building and Construction ..	1,225	4.81
Others	3,166	4.69
AGRICULTURAL, PASTORAL, MINING, ETC., CLASS—		
Agricultural	2,643	5.76
Pastoral	757	5.10
Mining and Quarrying ..	914	4.93
Others	140	5.19
INDEPENDENT MEANS ..	460	5.22
DEPENDENTS	2	1.00
OCCUPATION NOT STATED ..	461	4.87
Total	17,758	4.60

§ 4. Australian Life Tables.

Official Year Book, No. 20, pp. 962 and 969 to 973, contained a synopsis of the various Australian Life Tables, also comparisons with other countries of the expectation of life at various ages. Considerations of space, however, do not permit of their repetition herein.

§ 5. Graphical Representation of Vital Statistics.

(See Graphs pp. 965 to 970.)

1. **General.**—The progressive fluctuations of the numbers of births, marriages, and deaths are important indexes of the economic conditions and social ideals of a community. Graphs have accordingly been prepared which show these fluctuations. It should be remembered, however, that, normally, the increase of births and marriages should be proportional to the growth of population.

2. **Graphs of Annual Births, Marriages, and Deaths.**—The outstanding features of the graph representing births are :—An almost continuous rise in the numbers from 1860 to 1891 ; a decline till 1898, associated with the commercial crisis of 1891–93 ; a sharp fall in 1903 which accompanied a severe drought ; an uninterrupted increase from 1903 to 1914, the total for 1914 being the highest recorded ; a rapid decline until 1920, the result of war conditions. The figures for the last seven years show a tendency to greater stability.

The graph for marriages up to 1914 discloses approximately the same features as that for births—financial crises and droughts having a similar effect. The numbers for 1914 and 1915 showed a considerable increase over previous years. From 1916 to 1918 there was a rapid fall, the numbers being much below those of pre-war years. During 1919 and 1920 the recovery was very rapid, the total for the latter year being the highest ever recorded. The totals for 1923 to 1927 were not so favourable.

The characteristic feature of the graph of deaths is its irregular nature. On the whole, however, there is an increase which is due to the growth of population.

3. **Graphs of Annual Births, Marriages, and Death Rates, and Rate of Natural Increase.**—The graph of the birth rate indicates a well-marked decline throughout the whole period. This reduction of rate has been subject to fluctuations, there being two periods of arrested decline, viz., from 1877 to 1890, and from 1903 to 1912.

The variations in the marriage rates, though less abrupt than those in the birth and death rates, have ranged from a minimum of 6.08 per 1,000 which marked the culmination of a commercial depression in 1894 to a maximum of 9.62 per 1,000 in 1920.

On the whole, the graph for the death rate furnishes clear evidence of a satisfactory decline during the period. The graph brings into prominence six years in which the rates were very high when compared with adjacent years, viz., 1860, 1866, 1875, 1884, 1898, and 1919. Epidemics of measles were largely responsible for the high rates in the first five years, while influenza caused the increase during 1919.

The graph of natural increase shows roughly the same variations as that for the birth rate, but the influence of the death rate is indicated by the very low rates of natural increase for 1875, 1898, and 1919, which resulted from the exceptionally high death rates of those years.

CHAPTER XXVI.

MISCELLANEOUS.

§ 1. Patents, Trade Marks, and Designs.

1. Patents.—(i) *General.* The granting of patents is regulated by the Commonwealth Patents Act 1903–21, which, in regard to principle and practice, has the same general foundation as the Imperial Statutes, modified to suit Australian conditions. The Act is administered by a Commissioner of Patents. Comparatively small fees, totalling £8, are now sufficient to obtain for an inventor protection throughout Australia, Papua and the Territory of New Guinea, and the only renewal fee (£5) is payable before the expiration of the seventh year of the patent, or within such extended time, not exceeding one year, and upon payment of further fees, as may be allowed.

(ii) *Summary.* The number of separate inventions in respect of which applications were filed during the years 1923 to 1927 is given in the following table, which also shows the number of letters patent sealed in respect of applications made in each year

PATENTS, AUSTRALIA.—SUMMARY, 1923 TO 1927.

Particulars.	1923.	1924.	1925.	1926.	1927.
No. of applications	5,306	5,432	5,306	5,391	5,683
No. of applications accompanied by provisional specifications	3,454	3,637	3,405	3,515	3,627
Letters patent sealed during each year	2,464	2,313	2,479	2,706	2,638

(iii) *Revenue.* The revenue of the Commonwealth Patents Office during the years 1923 to 1927 is shown hereunder :—

PATENTS, AUSTRALIA.—REVENUE, 1923 TO 1927.

Particulars.	1923.	1924.	1925.	1926.	1927.
	£	£	£	£	£
Fees collected under—					
States Patents Acts ..	3	..	..	..	..
Patents Acts 1903–21 ..	27,995	26,259	29,017	30,967	30,602
Receipts from publications	599	1,004	926	733	1,101
Total	28,597	27,263	29,943	31,700	31,703

2. Trade Marks and Designs.—(i) *Trade Marks.* Under the Trade Marks Act 1905, the Commissioner of Patents is also Registrar of Trade Marks. This Act has been amended from time to time, the last amendment having been made in 1922. Special provisions for the registration of a "Commonwealth Trade Mark" are contained in the Act of 1905, and are applicable to all goods included in or specified by a resolution passed by both Houses of Parliament that the conditions as to remuneration of labour in connexion with the manufacture of such goods are fair and reasonable.

(ii) *Designs.* The Designs Act 1906, as amended by the Patents, Designs and Trade Marks Act 1910, and the Designs Act 1912, is now cited as the Designs Act 1906–1912. Under this Act a Commonwealth Designs Office has been established, and the Commissioner of Patents appointed "Registrar of Designs."

(iii) *Summary.* The following table shows the applications for trade marks and designs received and registered during the years 1923 to 1927 :—

TRADE MARKS AND DESIGNS, AUSTRALIA.—SUMMARY, 1923 TO 1927.

Applications.	1923.	1924.	1925.	1926.	1927.
RECEIVED.					
Trade Marks	2,773	2,829	2,770	2,821	2,960
Designs	488	498	554	329	580
REGISTERED.					
Trade Marks	2,038	1,801	2,029	1,971	2,177
Designs	377	453	439	537	546

(iv) *Revenue.* The revenue of the Trade Marks and Designs Office during the years 1923 to 1927 is given hereunder :—

TRADE MARKS AND DESIGNS, AUSTRALIA.—REVENUE, 1923 TO 1927.

Particulars.	1923.			1924.			1925.			1926.			1927.		
	Trade Marks.	Designs.	Publications.	Trade Marks.	Designs.	Publications.	Trade Marks.	Designs.	Publications.	Trade Marks.	Designs.	Publications.	Trade Marks.	Designs.	Publications.
	£	£	£	£	£	£	£	£	£	£	£	£	£	£	£
Fees collected under Commonwealth Acts	9,263	539	102	8,710	561	238	9,310	629	186	9,246	407	210	9,709	722	198

No fees in respect of Trade Marks have been collected under State Acts since the year 1922.

§ 2. Copyright.

1. **Legislation.**—Copyright is regulated by the Commonwealth Copyright Act of 1912, details of which will be found in previous issues of the Official Year Book (see No. 8, p. 1066), while, subject to modifications relating to procedure and remedies, the British Copyright Act of 1911 has been adopted and scheduled to the Australian law.

Reciprocal protection of unpublished works was extended in 1918 to citizens of Australia and of the United States under which copyright may be secured in the latter country by registration at the Library of Congress, Washington. The Commonwealth Government promulgated a further Order in Council which came into operation on the 1st February, 1923, and extended the provisions of the Copyright Act to the foreign countries of the Copyright Union, subject to the observance of the conditions therein contained.

2. **Applications and Registrations.**—The following table shows under the various headings the number of applications for copyright received and registered, and the total revenue received for the years 1923 to 1927 :—

COPYRIGHT, AUSTRALIA.—SUMMARY, 1923 TO 1927.

Particulars.		1923.	1924.	1925.	1926.	1927.
Applications received—						
Literary ..	.. No.	1,133	1,145	1,269	1,166	1,256
Artistic ..	.. No.	186	150	134	115	176
International ..	.. No.	3	2	15	23	13
Applications registered—						
Literary ..	.. No.	1,105	1,059	1,257	1,105	1,180
Artistic ..	.. No.	190	138	117	105	171
International ..	.. No.	13	2	4	19	10
Revenue ..	.. £	339	336	360	340	376

§ 3. Local Option, and Reduction of Licences.

1. **General.**—Local option concerning the sale of fermented and spirituous liquors is in force in all the States, the States being divided into areas generally conterminous with electoral districts, and a poll of the electors taken from time to time in each district regarding the continuance of the existing number of licensed premises, the reduction in number, or the closing of all such premises. Provision is made for giving effect to the results of the poll in each district in which the vote is in favour of a change.

2. **New South Wales.**—(i) *Local Option.* The Liquor Act of 1912 made provision for taking a vote of the electors on the parliamentary rolls on the question of continuance of existing licences, the reduction of the same, or that no licence be granted of public houses, wine-shops, and clubs. This vote was to take place simultaneously with that for a general election. Three such polls were taken, but under the Liquor (Amendment) Act of 1919, further taking of polls was suspended pending a referendum on the question of prohibition with compensation, to be taken within eighteen months after the passing of this Act. This referendum was not held, and a later amendment of the Act in 1923 fixed the first Saturday in September, 1928, as the day on which the vote is to be taken.

(ii) The referendum referred to in the previous paragraph was taken on 1st September, 1928, and the following statement shows the result of the poll, at which voting was compulsory. The question asked of the electors read—" *Are you in favour of prohibition with compensation ?* "

Prohibition Referendum, 1928.

Number of Qualified Voters		1,436,450
Votes cast for " Yes " ..	357,684	
Votes cast for " No "	896,752	
Invalid Votes	13,683	
Total votes recorded		1,268,119
Percentage on total qualified voters		88.28 per cent.

(iii) *Licences Reduction Board.* The Liquor (Amendment) Act of 1923 provided for the reconstitution, as from 1st July, 1924, of the Licences Reduction Board and of the Licensing Courts which control the issue of licences. Three Licensing Magistrates constitute the Licensing Court in each licensing district, as well as the Licences Reduction Board, so that one tribunal controls all matters relating to the issue and withdrawal of licences. The funds for compensation in respect of publicans' licences were obtained by a levy at the rate of 3 per cent. on the value of all liquor purchased during the preceding year, of which the licensees pay one-third and the owners two-thirds. Since the beginning of 1923 the Board has also been empowered to reduce the number of Australian wine licences, the holders of which were liable to pay fees into the compensation fund at the rate of 1 per cent. of their purchases. Contributions to the compensation fund ceased at 31st December, 1926, the accumulated funds at that date being sufficient to meet all possible claims.

The Board, which was established by the Liquor (Amendment) Act of 1919, commenced operations in 1920, and up to 31st December, 1927, had terminated 288 publicans' licences and 61 wine licences, and had accepted the surrender of 74 publicans' licences and 5 wine licences. The compensation awarded was £602,425 in respect of 360 publicans' licences and £53,130 for 65 wine licences, while compensation had not been awarded in respect of two publican's licences. The reductions made by the Board in the Sydney electoral district were 71 hotel licences and 31 wine licences, and the compensation awarded amounted to £155,870 and £28,075 respectively. In the Newcastle electoral district the reductions were 23 hotel licences, and the compensation awarded £29,470. The other reductions were in country districts. The fees payable into the compensation fund amounted to £1,515,245. During the years 1920 to 1927, 63 hotel licences were terminated by other than the Board's action, and 26 new licences were granted, and during the years 1923 to 1927, 8 wine licences were terminated and 2 new licences granted.

3. Victoria. (i) *Licensing Districts*—Under the Licensing Act of 1922, the previous system of local option was abolished, and provision was made for a vote of the electors for the Legislative Assembly to be taken once in every eighth year on the issue of "no licence," the first of such votes to be taken in the year 1930. The Act also prescribes that each licensing district shall consist of an electoral district, instead of the subdivisions which under the previous Acts formed licensing districts. Under the Redistribution of Seats Act passed in 1927 the new electorates became new licensing districts. Except by means of petitions under the special provisions for additional licences in areas proclaimed by the Governor in Council after recommendation by the Licensing Court, no licences to retail liquor can be obtained in these new electorates beyond the number existing therein on 1st January, 1917. The new electorates are in many cases widely different from the old areas.

(ii) *Licences Reduction Board.*—This Board was established in 1906, and in 1916 was constituted the Licensing Court. It has power to reduce the number of licences in each district by one-fourth of the number existing at 1st January, 1917. It has also the duty of fixing and awarding compensation to the owners and licensees of closed hotels and to the holders of Australian wine, of grocers' and of spirit merchants' licences if delicensed. The compensation fund was in 1916 merged into the licensing fund, which, in addition to the fees received from billiard table licences and permits for special facilities, is derived from all vendors of liquor who must pay in proportion to the cost of liquor purchased. The amount charged to the wholesale trade is 4 per cent. of the cost of all liquors sold to non-licensed persons, in addition to a fixed charge covering all other sales. The retail trade is charged 6 per cent. on liquor purchases, except the holders of Australian wine licences, who are charged 4 per cent. The expenses of operating the Licensing Act are a charge on the Licensing Fund, and, in addition, £23,000 is paid annually to the Police Superannuation Fund, and £63,000 to the municipalities which formerly granted licences. The balance is available for compensation purposes, but any surplus at the end of the financial year over an increment in the fund of £20,000 annually is carried to Consolidated Revenue. The balance in the Fund at the 30th June, 1927, was £401,715, and the amount transferred to Consolidated Revenue for the same year amounted to £175,539.

Under the 1922 Act, the Court has held deprivation sittings each year in different licensing districts, and has taken away 174 victuallers', 38 Australian wine, 3 spirit merchants', and 2 grocers' licences. When the Board came into existence in 1906, the number of hotels licensed was 3,521, of which 73 were roadside victuallers', and up to the 31st December, 1927, the number closed was 1,666. Of these, 1,240 represented hotels delicensed, and 426 hotels surrendered, the compensation paid to owners and licensees amounting to £888,411 and £186,155 respectively.

(iii) *Mallee and Additional Licences.* Under the 1916 Act, special provisions were made for the granting of victuallers' licences in proclaimed areas in the Mallee, and by the 1922 Act these provisions as amended by that Act extended to any area outside the Mallee country proclaimed for the purpose. Only one victualler's licence may be granted in any area in which at least 500 electors must reside. Licences have been granted in 11 such areas.

4. **Queensland.**—Local Option is regulated in Queensland by the Liquor Act of 1912, as amended by the Liquor Act Amendment Acts of 1920 and 1923. A vote on the question is to be taken on the request of one-tenth of the number of electors in an area, which is defined in the request, and such area may be (*a*) an electoral district, or (*b*) an electoral division of an electoral district, or (*c*) a group of two or more divisions of an electoral district, provided that the whole of such local option area is wholly comprised within one and the same electoral district. A separate request is necessary for each resolution on which a vote is to be taken.

By the amending Act of 1926 every local option vote must be taken in the month of May in every seventh year, after the vote which is expected to be taken in 1928, on a day to be fixed by the Governor in Council. On the 16th May, 1925, 43 polls were taken as requested in local option areas defined by the petitioners on the questions of prohibition in 25 areas, and new licences in 18 areas. Increase of licence was carried in 16 areas, while in 2 areas the majority for prohibition did not reach the necessary three-fifths of the total votes polled.

5. **South Australia.**—In this State the subject of local option is regulated by Part VIII. of the Licensing Act 1917. Under this Act each electoral district for the House of Assembly is constituted a local option district, and each electoral district may, by proclamation of the Governor, be divided into local option districts. A quorum of 500 electors, or of one-tenth of the total number of electors—whichever is the smaller number—in any district may petition the Governor for a local option poll. The persons entitled to vote are those whose names appear on the electoral roll and who reside in the local option district. A local option poll is taken on the same date as a general election.

In order to settle any doubt as to the validity of the proclamation of 1917 relating to local option districts, an Act was passed in 1922 by which such proclamation was declared to be valid, and the local option resolutions in force in old districts at the time of the proclamation were declared to be still in force notwithstanding any alterations in the boundaries of the districts.

Early in 1927 petitions were presented from 30 local option districts requesting polls in the various districts.

The poll was taken in conjunction with the General State Elections on 26th March, 1927, the results being that the second resolution, "That the number of licences be not increased or reduced," was carried in all districts.

6. **Western Australia.**—(i) *General.* By an Amending Act, No. 39 of 1922, the Local Option provisions of the Licensing Act 1911 were repealed, and in lieu thereof a Licences Reduction Board was constituted, and charged with the duty of reducing the number of licences throughout the State over a period of 6 years from 1st January, 1923, to the extent of the money for the time being to the credit of a fund to enable compensation to be paid to the lessors and licensees of premises deprived of a licence. The fund is formed by a levy of 2 per cent. per annum on the amount of liquor purchased for licensed premises, excluding duties thereon. More extended reference to this subject was made in Official Year Book No. 18, page 1030.

(ii) *Prohibition.* In addition to the above provisions, the Act of 1922 provides that in the year 1925 and in every fifth year thereafter on a day to be fixed by proclamation, a poll shall be taken in each electoral district as to whether prohibition shall come into force. It also provides that where prohibition has been carried and is in force, the proposal shall be that the licences for sale of intoxicating liquor be restored. Where a resolution of prohibition is carried, no compensation is payable. A poll was taken on the 4th April, 1925, with the following result:—In favour of prohibition, 41,362; against, 77,113; informal, 658; total, 119,133. The percentage of persons voting on the number enrolled (200,212) was 59.5.

7. **Tasmania.**—In this State the subject of Local Option is dealt with in Part V. (Sections 39 to 53) of "The Licensing Act 1908" as amended by the "Licensing Act 1917." The provisions of Part V. of the Act of 1908 did not come into force until 1st January, 1917. It was thereby provided that a poll of ratepayers was to be taken in each city and in each municipality in which more than one licensed house was situate, once in every third year. The most recent polls taken were Launceston, December, 1926; Hobart, May, 1927; and all other municipalities, April, 1927. In one municipality (New Norfolk) the resolution for continuance was carried. In each of the remaining 41 municipalities in which polls were taken, the statutory proportion of electors failed to vote and accordingly no resolution was carried.

§ 4. Lord Howe Island.

1. **Area, Location, etc.**—Between Norfolk Island and the Australian coast is Lord Howe Island, in latitude 31° 30′ south, longitude 159° 5′ east. It was discovered in 1788. The total area is 3,220 acres, the island being 7 miles in length and from ½ to 1¾ miles in width. It is distant 436 miles from Sydney, and in communication therewith by monthly steam service. The flora is varied and the vegetation luxuriant, with shady forests, principally of palms and banyans. The highest point is Mount Gower, 2,840 feet. The climate is mild and the rainfall abundant, but on account of the rocky formation only about a tenth of the surface is suitable for cultivation.

2. **Settlement.**—The first settlement was by a small Maori party in 1853; afterwards a colony was settled from Sydney. Constitutionally, it is a dependency of New South Wales, and it is included in the electorate of Sydney. A Board of Control manages the affairs of the island and supervises the palm seed industry referred to hereunder.

3. **Population.**—The population at the Census of 3rd April, 1921, was 65 males, 46 females—total 111.

4. **Production, Trade, etc.**—The principal product is the seed of the native or Kentia palm. The lands belong to the Crown. The occupants pay no rent, and are tenants on sufferance.

§ 5. Commonwealth Council for Scientific and Industrial Research.

1. **General.**—By the Science and Industry Research Act 1926, the previously existing Commonwealth Institute of Science and Industry was reorganized under the title of the Council for Scientific and Industrial Research. An account of the organization and work of the former Institute was given in previous issues of the Official Year Book. (*See* No. 18, p. 1062.)

2. **Science and Industry Research Act 1926.**—This Act provides for a Council consisting of—

(*a*) Three members nominated by the Commonwealth Government.
(*b*) The Chairman of each State Committee constituted under the Act.
(*c*) Such other members as the Council, with the consent of the Minister, co-opts by reason of their scientific knowledge.

The three Commonwealth nominees form an Executive Committee which may exercise, between meetings of the Council, all the powers and functions of the Council, of which the principal are as follow:—(*a*) The initiation and carrying out of scientific researches in connexion with primary or secondary industries in the Commonwealth;

(*b*) the training of research workers and the establishing of industrial research studentships and fellowships; (*c*) the making of grants in aid of pure scientific research; (*d*) the establishment of industrial research associations in any industries; (*e*) the testing and standardization of scientific apparatus and instruments; (*f*) the establishment of a Bureau of information; and (*g*) the function of acting as a means of liaison between the Commonwealth and other countries in matters of scientific research.

State Committees have been constituted in accordance with regulations that have been prescribed, and their main function is to advise the Council as to matters that may affect their respective States. A sum of £250,000 was appropriated under the terms of the Act for the purpose of scientific and industrial investigations. Subsequently an additional sum of £250,000 has been appropriated for a similar purpose.

3. **Science and Industry Endowment Act 1926.**—Under this Act the Government has established a fund of £100,000, the income from which is to be used to provide assistance (*a*) to persons engaged in scientific research, and (*b*) in the training of students in scientific research. Provision is made for gifts or bequests to be made to the fund, which is controlled by a trust consisting of the three Commonwealth nominees on the Council. In accordance with the Act arrangements have been made to send a number of qualified graduates abroad for training in special fields of work.

4. **Work of the Council.**—The full Council held its first meeting in June, 1926, since which time it has held meetings at about half-yearly intervals. It has adopted a policy of placing each of its major fields of related researches under the direction of an officer having a standing at least as high as, if not higher than, that of a University Professor.

The main branches of work of the Council are (i) plant problems; (ii) irrigation settlement problems; (iii) entomological problems; (iv) animal nutrition; and (v) animal diseases. As regards plant problems, a Division of Economic Botany is being established to undertake research on various diseases of plants of economic value, and in particular, "bitter pit" in apples, tomato wilt, and smuts and rusts of cereals. Laboratories exist at Merbein (Victoria) and Griffith (New South Wales) where cultural problems connected with viticulture and citriculture, respectively, are being investigated. A Division of Economic Entomology is being organized to carry out an extensive investigation of the possibilities of controlling by biological means various Australian plant and insect pests. Insect problems such as those of the blowfly, the buffalo fly, codlin moth, etc., and plant problems such as St. John's wort, ragwort, etc., will be investigated. As regards animal nutrition, a laboratory has almost been completed in the grounds of the University at Adelaide, in which this work will be undertaken. This investigation is of a very fundamental nature and for many years will be confined to the sheep. Considerable progress in the breeding up of a stock of laboratory animals and in the establishment of one or two small field stations has already been made. In the field of animal diseases, six veterinary investigators are engaged in researches into such problems as the sheep blowfly pest, stomach and lung parasites of sheep, tuberculosis and pleuro-pneumonia, and braxy disease.

The Council has recently received reports concerning forest products, cold storage and dairy researches. Investigations are to be initiated at an early date. In addition to the activities mentioned above, the Council is engaged on a number of miscellaneous researches relating to the prickly pear pest, the Tasmanian underground grass grub, pottery, tannin extracts, poison plants, paralysis in pigs, and mineragraphy. A number of special Committees and Boards has also been formed, e.g., a Committee on the Maintenance of Standards and a Radio Research Board.

In carrying out its functions it is the policy of the Council to co-operate closely not only with existing scientific institutions and State Government Departments in Australia, but also with similar organizations in other parts of the Empire.

As far as Australia itself is concerned an important scheme of co-operation in agricultural research has been set up in the shape of a Standing Committee on Agriculture. This Committee consists of the permanent heads of the State Departments of Agriculture and of representatives of the Council. All agricultural research projects are referred to the Committee prior to the actual initiation of the work, and in that way unnecessary duplication of effort is avoided.

§ 6. The Commonwealth Solar Observatory.

1. **Reasons for Foundation.**—The Commonwealth Solar Observatory was established for the study of solar phenomena, for allied stellar and spectroscopic research, and for the investigation of associated terrestrial phenomena. Its situation is such that it will fill a gap in the chain of existing astrophysical observatories; with its completion there will be stations separated by 90 degrees of longitude round the globe. In addition to advancing the knowledge of the universe and the mode of its development, it is hoped that the eventual discovery of the true relation between solar and terrestrial phenomena may lead to results which will prove of direct value to the country.

2. **History of Inauguration.**—A short account of the steps leading up to the establishment of the Observatory will be found in Official Year Book No. 19, p. 979. Limits of space preclude its repetition in this issue.

3. **Site of the Observatory.**—The site selected for the Observatory is on Mount Stromlo, a ridge of hills about seven miles west of Canberra. The highest point is 2,560 feet above sea level, or about 700 feet above the general level of the Federal Capital City. A road has been constructed to the summit, upon which has been erected the temporary building to house the Oddie telescope. From the summit clear views are obtained in all directions. The approach to the Observatory passes the reservoir which supplies Canberra with water, and thence follows the eastern side of the ridge past several sheltered sites suitable for residences for the members of the staff, who will thus be within easy reach of the instruments to be housed on its crest.

4. **Buildings.**—The temporary structure for housing the Oddie telescope, which was the first building erected upon Mount Stromlo, is a concrete building, comprising a central dome 17 feet in diameter, with four rooms opening off it. A 60,000 gallon reservoir built near the summit is fed with water pumped from the main reservoir 120 feet below. In December, 1926, the administrative building upon Mt. Stromlo was occupied, and the apparatus, which had previously been housed and operated at the Hotel Canberra, transferred thereto and installed.

The present building programme includes the building to house the 30-inch reflecting telescope, the library, sun-telescope, electric substation, store, workshop and spectroscopic laboratory. With the exception of the first-named, these buildings will be centred about the administrative building, with which they will be connected by covered ways. Electric light and power have already been conveyed to the residential area and to the summit. The station is connected by telephone with the Canberra Post Office. The preliminary work of assembling the instruments, testing them and making a beginning with the observing programme was done in temporary offices in one of the pavilions of the Hotel Canberra.

5. **Equipment.**—The bulk of the present equipment is due to the generosity of supporters of the movement in England and Australia. The gifts include a 6-inch Grubb refracting telescope, presented by the late W. E. Wilson, F.R.S., and Sir Howard Grubb, F.R.S., trustees of the late Lord Farnham; a 9-inch Grubb refractor with a 6-inch Dallmeyer lens, both presented by the late Mr. James Oddie, of Ballarat; while Mr. J. H. Reynolds, of Birmingham, has presented a large reflecting telescope with a mirror 30 inches in diameter. Donations amounting to over £2,500 have been received, and will form the nucleus of a Foundation and Endowment Fund. With these generous gifts as testimony to the value of Australia's co-operation in solar and astrophysical research, it is hoped that the Government will liberally equip and endow the institution so that it may rank with the great observatories of the world.

6. **Observational Work.**—The Oddie telescope fitted with a dense flint prism has been employed in routine work upon stellar spectra, with the object of measuring the absolute brightness and distances of the stars. To determine the intensity of the auroral component, the luminosity of the night sky was observed with a Rayleigh photometer. By means of Abbott's standard pyrheliometers, measures have been recorded of the solar radiation reaching the earth throughout the 24 hours. Variation in the radiation from certain

stars has been measured by a photoelectric photometer and observations have been made of the potential gradient of the earth's electric field. Laboratory researches upon certain spectroscopic phenomena are in progress.

7. **Staff.**—The present staff consists of the Director, four Assistants, a Research Fellow, clerical assistant, two mechanics, and two groundsmen.

§ 7. Department of Chemistry, South Australia.

In South Australia, a Department of Chemistry was formed in 1915. The Department is principally engaged in general routine chemical examinations and analyses in pursuance of various Acts of Parliament and for Government Departments, but the chemical investigation of local products and industries forms an important branch of its work. The Department also checks the quality of gas supplied to consumers in the metropolitan area. At first the Department issued bulletins, of which nine have been published, but since 1918 the results of investigations made have been embodied in the reports of the Advisory Council of Science and Industry of South Australia, of which the Director of the Department is Vice-Chairman. Researches have been carried out for the Wheat Weevil Committee, and investigations have been made into the lignites at Moorlands, the conditions of safe storage of petrol in tanks, the utilization of grapes and surplus lemons, cold-water paints, calorific values of South Australian firewoods, charcoal and coke, kernel oil from peaches and apricots, and a survey of the tannin resources of South Australia. Further investigations into South Australian lignite are reported in the South Australian Mining Review.

§ 8. State Advisory Council of Science and Industry of South Australia.

The Advisory Council of Science and Industry of South Australia is the result of the fusion of the members of the Committee of Scientific Research and the Committee on Post-war Problems. The members of the Council, who all act in an honorary capacity, are the nominees of the different public bodies in the State, such as the Chamber of Commerce, the Chamber of Manufactures, Associated Banks, United Trades and Labour Council, Employers' Federation, etc., and include a number of Government technical officials and University professors.

For the purposes of investigation, the Council is divided into Committees, under the headings Agriculture, Pastoral, Mineral, Manufacture, Trade, Commerce, and Transport. These Committees consider and take evidence on subjects proper to their provinces, and report to the Government.

The office of the Council is attached to the Department of Chemistry, where research work is carried out at the instance of the Council, the Director of Chemistry being Vice-Chairman of the Council. Eleven reports have been issued for the years 1919 to 1927, and contain a summary of the work done, with reports of investigations, including the "Wheat Pests Problem;" "Utilization of Surplus Lemons;" "Cold Water Paint;" "Calorific Values of Different Firewoods;" "Peach and Apricot Kernel Oil;" "Tannin Resources of South Australia;" "Brown Coal Experiments;" "A Gauge for Petrol Tanks;" "Unsafe Storage of Petrol in Bulk;" "A Process for Preventing Infestation of Insect Pests in Dried Fruits;" and "The Use of Aluminium Vessels for Cooking Foods," etc. The Council also distributes information forwarded by the Commonwealth Department of Markets.

§ 9. Valuation of Australian Production.

1. **Value of Production.**—The want of uniformity in methods of compilation and presentation of Australian statistics renders it an extremely difficult task to make anything like a satisfactory valuation of the various elements of production. At present there is so little accurate statistical knowledge regarding such industries as forestry, fisheries, poultry, and bee-farming, that any valuation of the production therefrom can only be regarded as the roughest approximation. As a matter of fact, complete information as to value of production in all States is available in regard to the mining industry alone, and even in this case adjustments have to be made before the returns are strictly comparable. Careful estimates have been made in connexion with the value of production from the agricultural and pastoral industries, which, it is believed, in the main give fairly accurate results. The returns given in the following table for 1916 and subsequent years may be taken as substantially correct. The table hereunder shows the approximate value of the production from all industries during the years specified :—

ESTIMATED VALUE OF PRODUCTION.—AUSTRALIA, 1916 TO 1926-27.

Year.	Agriculture.	Pastoral.	Dairy, Poultry, and Bee-farming.	Forestry and Fisheries.	Mining.	Manufacturing.(a)	Total.
	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.	£1,000.
1916 ..	61,255	83,003	27,931	6,062	23,192	60,502	261,945
1917 ..	59,641	91,917	31,326	6,147	24,998	65,327	279,356
1918 ..	59,036	96,573	33,738	6,890	25,462	70,087	291,786
1919–20 ..	72,202	111,594	38,830	9,670	18,982	92.330	343,608
1920–21 ..	112,801	90,573	52,613	11,136	21,613	101,778	390,514
1921–22 ..	81,890	74,982	44,417	10,519	19,977	112,517	344,302
1922–23 ..	84,183	97,029	43,542	11,124	20,316	123,188	379,382
1923–24 ..	81,166	110,075	42,112	11,866	22,232	132,732	400,183
1924–25 ..	107,163	126,773	45,190	12,357	24,646	137,977	454,106
1925–26 ..	89,267	113,327	48,278	12,784	24,592	143,256	431.504
1926–27 ..	98,295	111,168	46,980	12,790	24,007	153,634	446,874

(a) These amounts differ from those given in Chapter XXII., Manufacturing Industry, which include certain products included under Dairy Farming and Forestry in this table.

2. **Relative Productive Activity.**—The relative output or production per head of population measured quantitatively cannot be gauged from a mere statement of the total value of production from year to year. If measured by mere value, increase of price might have the effect of making an equal production to that of a time when prices were lower, and show an increase which would, of course, be misleading. For example, the annual figures relating to the estimated value of production from Australian industries do not directly show whether there has been any increase in the *quantity* produced, since the price-level at the time is itself a factor in the determination of the values. Before therefore, any estimate of the relative increase or decrease in production (that is, in the relative quantity of output) can be formed, the variations due to the price element must be eliminated. This is done in the following table, in which Column I. shows the estimated *value* of production (i) in the aggregate and (ii) per head of mean population. In Column II. the estimated value of production per head of population is shown in the form of index-numbers with the year 1911 as base ; that is to say, the production per head in 1911 is made equal to 1,000, and the values for the other years computed accordingly. In Column III. production price index-numbers are given ; it is assumed that these index-numbers reflect, with substantial accuracy, variations in production prices in Australia as a whole. The figures in Column IV. are obtained by dividing the figures for each year in Column II. by the corresponding figures in Column III. They show the

estimated relative productive activity per head of population, taking the year 1911 as the basic or standard year, the fluctuations due to variations in prices having been eliminated :—

RELATIVE PRODUCTIVE ACTIVITY.—AUSTRALIA, 1871 TO 1926-27.

Year.	I. Estimated Value of Production.		II.	III.	IV.
	(i) Total (000 omitted)	(ii) Per Head of Population.	Relative Value of Production per Head (Year 1911 = 1,000).	Production Price Index-Numbers (Year 1911 = 1,000). (a)	Estimated Relative Productive Activity Index-Numbers (Year 1911 = 1,000). (a)
	£	£			
1871	46,700	27.46	667	1,229	543
1881	71,116	30.83	749	1,121	668
1891	96.087	29.65	720	945	762
1896	92,605	26.06	633	922	686
1901	114,585	29.96	728	974	747
1906	147,043	35.94	873	948	921
1911	188,359	41.18	1,000	1,000	1,000
1916	261,945	53.26	1,293	1,398	925
1922–23	379,382	67.35	1,636	1,753	933
1923–24	400,183	69.60	1,690	1,850	914
1924–25	454,106	77.31	1,877	1,880	998
1925–26	431,504	72.01	1,748	1,836	952
1926–27	446,874	73.13	1,776	1,762	1,008

(a) Production Price Index-numbers are not available prior to 1908, and Wholesale Price Index numbers are substituted therefor.

The total production from all recorded industries during 1926–27 was £446,874,000, equal to an average of £73.13 per inhabitant.

The index of productive activity given above is based on total population and is that most usually employed for such a purpose. As a measure of the efficiency of the whole community to provide with its existing organization the commodities produced in the industries concerned the index is correct, but it does not necessarily indicate the variation in efficiency of the workers engaged in those industries, since these workers may not represent a constant proportion of the total population. As a fact this proportion is diminishing, and if the index were based on persons engaged in the industries rather than on total population it would be increased by nearly 10 per cent. in the later years of the period, and the index for 1926–27 instead of exceeding the 1911 standard by less than 1 per cent. would be in excess of it by more than 10 per cent. This aspect of the question is at present the subject of further investigation.

In Year Book No. 5 (page 1217) will be found the value of production in each State at decennial intervals since 1871, and for the year 1909. Details for individual States are not available for subsequent years owing to discontinuance by the Customs Department of the collection of statistics of interstate trade.

§ 10. Commonwealth Parliamentary and National Library.

When the Commonwealth Parliamentary Library was created in 1902, it was recognized that at such time as the Federal Capital was established it would be necessary to have available there, for the use of Members and the Public Servants, a Library whose scope was wider than that usually associated with a purely Parliamentary one. To this end, therefore, this Library was developed on lines similar to those of a State Public Library, and particular attention was given to the acquisition of works relating to or published in Australia. In pursuance of this policy it acquired in 1909 a valuable collection of *Australiana*, comprising about 10,000 volumes, which had been formed by Mr. E. A. Petherick. In 1912, also, a provision was included in the Commonwealth Copyright Act requiring the publisher of any book, pamphlet, etc., printed in the Commonwealth to supply a free copy to it. In the same year it undertook the publication of the Historical Records of Australia. The rapid development of the Australian and National Sections of the Library led the Library Committee in 1923 to decide that the title " Commonwealth National Library " should be given to these, and that at Canberra the Library should be divided into two sections—a Parliamentary and a National Section —the former to be housed in Parliament House, the latter in a separate building, to which the public would be given free access. Though now, therefore, in two sections, it is essentially one Library, with one administration.

The total number of volumes at the beginning of 1928 was 79,000 books and 6,500 pamphlets, its chief features being its unique collection of Captain Cook's manuscripts and early works relating to Australia, also its extensive series of official publications of Great Britain and all the Dominions.

§ 11. Film Censorship.

1. **General.**—(i) *Legislation.* The censorship of films derives its authority from section 52 (*g*) of the Customs Act, which is the section giving authority to prohibit the importation of goods. Under this section proclamations have been issued prohibiting the importation of films and relative advertising matter except under certain conditions and with the consent of the Minister. The conditions governing importation are contained in regulations issued under the Customs Act and provide, *inter alia*, that no film shall be registered which in the opinion of the censor is (*a*) blasphemous, indecent or obscene ; (*b*) likely to be injurious to morality, or to encourage or incite to crime ; (*c*) likely to be offensive to the people of any friendly nation ; (*d*) depicts any matter the exhibition of which is undesirable in the public interests ; or (*e*) likely to be offensive to the people of the British Empire.

The new regulations governing the exportation of Australian-made films are similar, with the addition that no film may be exported which in the opinion of the Censor is detrimental to Australian interests or is likely to lower Australia in the eyes of the world.

The Censorship consists of a Chief Censor and a Deputy Censor, and importers have the right of appeal to the Minister against their decisions.

(ii) *Imports of Films.* Imported films dealt with by the Censorship for the years 1926 and 1927 were as follows :—

IMPORTS OF FILMS, 1926 AND 1927.

Heading.	1926.		1927.	
	Films No.	Feet (one copy).	Films No.	Feet (one copy).
Passed without eliminations	1,590	3,584,877	1,725	3,581,026
Passed after eliminations	283	1,610,195	336	2,076,515
Rejected in first instance	87	538,203	90	539,797
Total	1,960	5,733,275	2,151	6,197,338

The countries of origin of the abovementioned films will be found in the following table :—

IMPORTS OF FILMS.—COUNTRY OF ORIGIN, 1926 AND 1927.

Country of Origin.	1926.		1927.	
	Films No.	Feet (one copy).	Films No.	Feet (one copy).
United States of America	1,618	5,085,720	1,681	5,119,241
United Kingdom	198	351,456	271	492,869
Other Countries	144	296,099	199	585,228
Total	1,960	5,733,275	2,151	6,197,338

(iii) *Export of Films.* The new regulations governing the export of films came into force on the 16th September, 1926. The number of films exported up to 31st December, 1927, and their length were 613 and 546,168 feet (one copy) respectively, and were consigned to New Zealand, England, Territory of New Guinea, United States of America, Straits Settlements, Dutch East Indies, and Pacific Islands.

(iv) *Royal Commission.* The Royal Commission on the Moving Picture Industry in Australia presented its report to Parliament on 17th March, 1928. Over 250 witnesses were examined in the course of the Commission's inquiries, and the report embodies numerous recommendations relating to (*a*) Film censorship; (*b*) Distribution of films; (*c*) Exhibitors and the exhibition of films; (*d*) Film production in Australia; (*e*) The quota system; (*f*) The film and native races; (*g*) Films for children; (*h*) Educational films; (*i*) Taxation; (*j*) British films; (*k*) Customs duty; and (*l*) Customs and State legislation. The subject-matter of the recommendations are, however, too voluminous to be dealt with in this work.

§ 12. Marketing of Australian Commodities.

1. **Introduction.**—Particulars in respect of the various Commonwealth Acts and Regulations, together with the operations of the Boards or Councils appointed to assist or control the marketing of Australian commodities, are set out below :—

2. **Dairy Produce Export Control Act 1924.**—(i) *General.* This Act, which was introduced at the request of the dairying industry, was passed by the Commonwealth Parliament with the object of organizing the marketing of Australian dairy produce overseas.

(ii) *Dairy Produce Export Control (Poll and Election of Board) Regulations.*—Regulations were approved providing for a poll of producers to enable the Act to operate and for the election of members to the Dairy Produce Control Board.

(iii) *Dairy Produce Control Board.*—A Board consisting of thirteen members, of whom nine are producers' representatives, was appointed under the Act to supervise the export, and the sale and distribution after export, of Australian dairy produce. In conjunction with its London Agency the Board has improved organization on overseas markets, ensured continuity of supply, regulated shipments, stabilized overseas prices, obtained reductions in overseas freight and insurance, and participated in an advertising campaign in the United Kingdom.

(iv) *Dairy Produce Export Control Licences Regulations.*—Provision was made for the issue, under certain conditions, of licences to exporters to permit of butter and cheese being exported from Australia.

3. **Dairy Produce Export Charges Act 1924.**—(i) *General.* This Act provided for the imposition of a levy on all butter and cheese exported from the Commonwealth. The levy is used to cover administrative expenses of the Board, and for advertising and other purposes.

(ii) *Dairy Produce Export Charges Regulations.* Regulations were issued under this Act to lower the rate of levy fixed upon the export of butter and cheese.

4. **Dried Fruits Export Control Act 1924.**—(i) *General.*—This act was passed by the Commonwealth Parliament at the request of the dried fruit industry to organize the oversea marketing of Australian dried fruit.

(ii) *Dried Fruits Export Control (Poll and Election of Board) Regulations.* Regulations providing for a poll of dried fruit growers were issued to enable the Act to operate and to hold an election of members to the Dried Fruits Control Board.

(iii) *Dried Fruits Control Board.*—A Board composed of seven members, including four growers' representatives, was appointed to control the export, and the sale and distribution after export, of Australian sultanas, currants and lexias. In conjunction with its London Agency the Board has improved the oversea marketing and increased the demand for Australian dried fruits. Its system of appraisement has resulted in more satisfactory realizations, and its methods of ensuring continuity of supply, regulating shipments, advertising and securing reductions in freight and insurance have benefited the industry considerably.

(iv) *Dried Fruits Export Control Licences Regulations.*—Regulations were framed providing for the issue, under certain conditions, of licences to exporters to enable Australian sultanas, currants and lexias to be shipped overseas.

5. **Dried Fruits Export Charges Act 1924.**—This Act provided for the imposition of a levy on all sultanas, currants and lexias exported from the Commonwealth. The levy is used to defray the administrative expenses of the Board and the cost of advertising, &c.

6. **Dried Fruits Export Charges Act 1927.**—This Act provides for the exemption of sultanas, currants or lexias from the levy imposed after recommendation by the Board.

7. **Canned Fruits Export Control Act 1926.**—(i) *General.* This legislation was introduced at the request of canners and representative organizations of fruit growers, and provides for the establishment of a Canned Fruits Control Board. The Act could not come into operation until a poll of canners was taken to determine whether a majority favoured the system of control provided under the Act. The poll was accordingly taken on 29th November, 1926, and a substantial majority of votes was cast in favour of the Act.

The Board is composed of three members—one representative of proprietary and privately-owned canneries, one representative of co-operative and State-controlled canneries, and one representative appointed by the Commonwealth Government. The terms and conditions of office are similar to those adopted in connexion with the Dried Fruits and Dairy Produce Boards. The Board controls the export of canned apricots, peaches, and pears only, but provision is made in the Act for the inclusion of pineapples or any other variety of canned fruits should the canners concerned at any time desire it. No canned fruits to which the Act applies are permitted to be exported from Australia unless under a licence issued to the exporter by the Department of Markets and Migration, subject to conditions recommended by the Board. Owing to a considerable drop in the production of canned fruits during the season 1926-27 only a small quantity of fruit was available for export, consequently the operations of the Board were somewhat limited.

(ii) *Regulations under the Act.*—The Regulations issued under the Act provide for the (*a*) preparation of rolls of voters for the poll and election of members to the Board; (*b*) taking the poll and election of members to the Board; (*c*) the rates of fees and expenses to be paid to members in connexion with their attendance at Board meetings, &c.; (*d*) the system of export under licence, which operates as from 14th February, 1927; and (*e*) the method of signing cheques drawn by the Board. For the season 1926–27, exporters are required to obtain a separate licence for each shipment to Great Britain, and a general licence, granted for a period from date of issue to 31st December, 1927, for all shipments to destinations other than Great Britain. The conditions under which licences are issued were adopted on the recommendation of the Board.

8. **Canned Fruits Export Charges Act 1926.**—(i) *General.*—The Canned Fruits Control Board is financed by the canning industry by means of a levy imposed on all canned fruits exported. Under this Act a levy not exceeding one-fourth of one penny per 30-oz. tin (3d. per dozen tins) may be imposed.

(ii) *Canned Fruits Export Charges Regulations.*—The Board has determined that a levy of 1d. per dozen tins on exports will produce sufficient revenue for its present requirements, and these Regulations provide for that rate to be adopted. The charge was imposed as from 14th February, 1927.

9. Fresh Fruits Overseas Marketing Act 1927.—This Act was passed by the Commonwealth Government at the request of the fresh fruit industry, to organize the overseas marketing of Australian fresh fruit. This Act, which is dependent for operation upon a poll of fresh fruit growers, will not now operate in view of the adverse result of the poll.

10. Fresh Fruits Export Charges Act 1927.—This Act was subsidiary to the Fresh Fruits Overseas Marketing Act, and will not now operate in view of the adverse decision at the poll.

11. Pearl-Shell Overseas Marketing Act 1927.—(i) *General.*—This measure provides for the control of the export and sale oversea of pearl-shell produced in the Commonwealth. The Act provides for taking a poll of producers to decide whether it shall be brought into operation. Should the result of the poll be favourable, a Pearl-Shell Overseas Marketing Board will be appointed consisting of one representative elected by the producers of Western Australia, one representative elected by the producers of Queensland and the Territory of North Australia, and a representative of the Commonwealth Government, appointed by the Governor-General. The Act provides for the prohibition of the export of pearl-shell except by licence issued by the Minister subject to such conditions and restrictions as are prescribed after recommendation to the Minister by the abovementioned Board. The Board may accept control of any pearl-shell placed under its control, and will have full authority to make arrangements for its handling, marketing, storage, shipment, sale and all other matters necessary in connexion with its disposal.

(ii) *Pearl-Shell Overseas Marketing (Preparation of Rolls) Regulations.* These regulations provide machinery for the preparation of a roll of pearl-shell producers entitled to vote at the poll to decide whether the Pearl-Shell Overseas Marketing Act shall be brought into operation, and to vote at the election of members of the Board.

(iii) *Pearl-Shell Overseas Marketing (Poll and Election of Board) Regulations.*—These regulations prescribe the machinery for taking the poll of producers under the Pearl-Shell Overseas Marketing Act, and conducting the election of members of the Overseas Marketing Board.

12. Pearl-Shell Export Charges Act 1927.—This Act provides for a levy on pearl-shell exported from Australia at the rate of £3 per ton, but this rate may be reduced by regulation. The funds collected as a result of this levy will be used in the payment of the administrative and other expenses of the Pearl-Shell Overseas Marketing Board, and any surplus will be invested in securities of, or guaranteed by, the Commonwealth or any State Government.

13. Export Guarantee Act 1924-25.—(i) *General.* Under this measure the Minister may, by *Gazette* notice, declare that the Act shall apply to any particular produce the export or marketing of which is controlled by a Board. The Treasurer may guarantee to the Commonwealth Bank or any other prescribed Bank the amount of any advance made by the Bank to a Board in connexion with the financing of any scheme for the export and marketing of the produce under the control of the Board. Any such guarantee shall not be more than 80 per cent. of the market value of the produce, which market value shall be determined by the Minister. The Treasurer may revoke the guarantee if it appears to him that its conditions have not been observed. Under this Act the Minister may also, upon the receipt of a report and recommendation from the Commonwealth Board of Trade, grant assistance :—

(*a*) in relation to the export and marketing of primary produce ;
(*b*) to the growers of primary produce used or to be used in the manufacture or preparation of goods of a kind suitable for export from the Commonwealth.

The sum of £500,000 has been appropriated for granting such assistance.

(ii) *Assistance granted to 30th September,* 1928.—Assistance under the *Export Guarantee Act* 1924–25 granted to 30th September, 1928, amounted to £436,576.

CHAPTER XXVII.

STATISTICAL ORGANIZATION AND SOURCES OF INFORMATION.

§ 1. General.

1. **Development of Australian Statistics.**—(i) *General.* Previous issues of this Year Book included an outline of the history and development of statistics in Australia, particular reference being made to the Crown Colony Blue Books, Statistical Registers, Prominent State Statisticians, Statistical Conferences, the Foundation of the Federal Bureau, and Uniformity of Control. It is not proposed to repeat this information in this issue. (See Year Book No. 19, p. 988.)

(ii) *Present Organization.* The organization in respect of the collection, tabulation, etc., of statistical data as between the State and Federal Statistical Bureaux, and State and Federal Government Departments was described in Official Year Book No. 19, p. 990. Limits of space preclude its repetition in this issue.

§ 2. Statistical Publications of Australia.

1. **General.**—The official statistical publications of Australia may be divided bibliographically into two main divisions, viz. :—(1) Commonwealth publications dealing both individually and collectively with the several States of the Commonwealth, and (2) State publications dealing with individual States only. Besides these there are many other reports, etc., issued regularly, which though not wholly statistical, necessarily contain a considerable amount of statistical information. The more important of these published to November, 1928, are indicated below.

2. **Commonwealth Publications.**—Commonwealth publications may be grouped under two heads, viz. :—(i) Publications issued by the Commonwealth Statistician, and (ii) Parliamentary and Departmental Reports and Papers.

(i) *Publications issued by the Commonwealth Statistician.* The following is a list of the principal statistical publications issued from the Commonwealth Bureau of Census and Statistics since its inauguration up to November, 1928 :—

Australian Life Tables, 1901-1910. *Australian Joint Life Tables*, 1901-1910.

Census (1911) Bulletins.

Census (1911) Results.—Vols. I., II., and III., with Appendix "Mathematical Theory of Population."

Census (1921) Results.—Bulletins, Nos. 1 to 26. Parts I to XVI., forming Vol I., and Parts XVII. to XXIX., forming, with the Statistician's Report, Vol II. Note.—Part XXVIII., Life Tables.

Finance—Bulletins, 1907 to 1916-17 annually; 1917-18 and 1918-19 (one vol.); 1919-20 and 1920-21 (one vol.); 1921-22 to 1926-27 annually.

Labour and Industrial Statistics—Memoranda and Reports, various, to 1913. *Labour Report*, annually, 1913 to 1927.

Local Government in Australia—July, 1919.

Official Year Book of the Commonwealth of Australia—Annually, 1907 to present issue (1928).

Oversea Trade, annually, 1906 to 1926-27.

Pocket Compendium of Australian Statistics (formerly *Statistical Digest*), 1913, 1914, 1916, and 1918 to 1928 annually.

Population and Vital Statistics Bulletins—Reports, various. Commonwealth Demography, 1911 to 1927 annually.

Production—Bulletins, annually, 1906 to 1926-27.

Professional Papers—Various. A full list will be found in Official Year Book No. 13, p. 3.

Quarterly Summary of Australian Statistics—first issue, No. 70, December, 1917, replacing *Monthly Summary of Australian Statistics* (Bulletins 1 to 69), and incorporating data from earlier publications relating to Finance, Labour, Shipping, Trade, Vital Statistics, Oversea Migration, etc.

Social Insurance—Report to the Hon. the Minister of Trade and Customs, 1910.

Social Statistics—Bulletins, 1907 to 1915 annually, and 1918.

Superannuation for the Commonwealth Public Service—Report to the Hon. the Minister for Home Affairs, 1910.

Transport and Communication—Bulletins, 1906, 1908 to 1916 annually; 1919 to 1927 annually.

Wealth—The Private Wealth of Australia and its Growth as ascertained by various methods, together with a Report of the War Census in 1915.

(ii) *Commonwealth Parliamentary and Departmental Reports and Papers.* Lists of the principal official reports and other documents containing statistical information issued from the inauguration of the Commonwealth were given in Year Books up to No. 15, but limits of space preclude the incorporation of this information in the present volume.

3. **State Publications.**—The chief statistical publications of each State are set out hereunder. Limits of space preclude a further enumeration of the various Departmental Reports, statements of accounts, etc., issued by officials, boards, local government bodies, etc., in each State.

(*a*) New South Wales—Statistical Register (annual); Official Year Book of New South Wales (annual); Statesman's Year Book (annual); Vital Statistics (monthly and annual); Statistical Bulletin (monthly to December, 1919, thereafter quarterly).

(*b*) Victoria—Statistical Register (annual to 1916, then discontinued); Victorian Year Book (annual); Statistical Abstracts (quarterly to 1917).

(*c*) Queensland—Statistical Register (annual); Official Year Book, 1901; A.B.C. of Queensland Statistics (annual); Vital Statistics (annual and monthly).

(*d*) South Australia—Statistical Register (annual); Official Year Book, 1912 and 1913; Statesman's Pocket Year Book (annual).

(*e*) Western Australia—Statistical Register (annual); Statistical Abstracts (quarterly, previously issued monthly to July, 1917); Pocket Year Book of Western Australia (annual); Circular (monthly), containing Principal Statistics.

(*f*) Tasmania—Statistical Register (annual); Statesman's Pocket Year Book (annual); Statistical Summaries (annual); Vital Statistics and Migration (annual and monthly).

§ 3. Selected List of One Hundred Representative Works Dealing with Australia.

It is not claimed that this list is completely representative, as consideration has been given to the date of publication, also as to whether the book is still in print.

Much important literature necessary to the study of many aspects of Australia is contained in official publications or in Parliamentary Papers, which have not been included in this list.

GENERAL AND DESCRIPTIVE.

BOLAM, A. G. The Trans-Australian Wonderland. 3rd edition. Melbourne, 1924.
BRADY, E. J. Australia unlimited. Melbourne, 1918.
FULLERTON, M. E. The Australian bush. London, 1928.
GRONDONA, L. ST. C. The Kangaroo keeps on talking; or, the All-British continent. London, 1925.
JOHNS, F. Who's Who in Australia, 1927–28. Adelaide, 1927.
JOSE, A. W., *and* CARTER, H. J., *editors*. The illustrated Australian Encyclopaedia. 2 vols. Sydney, 1925–26.
OXFORD SURVEY OF THE BRITISH EMPIRE. Vol. 5, Australasia. Oxford, 1914.
STUART, E. J. A land of opportunities: being an account of the author's recent expedition to explore the Northern territories of Australia. London, 1923.

DISCOVERY AND EARLY VOYAGES AND EXPLORATION.

Calvert, A. F. The Discovery of Australia. Taunton, 1901.

Calvert, A. F. Exploration of Australia. 2nd edition. 2 vols. London, 1901.

Collingridge, G. The discovery of Australia. Sydney, 1895.

Favenc, E. History of Australian exploration, from 1788 to 1888. Sydney, 1888.

Favenc, E. Explorers of Australia, and their life work. Christchurch, 1908.

Major, R. H., *editor*. Early voyages to Terra Australis. London, 1859.

Scott, E. Terre Napoléon: a history of French explorations and projects in Australia. London. 1910.

Wood, G. A. The discovery of Australia. London, 1922.

HISTORY.

Bean, C. E. W., *editor*. Official history of Australia in the War of 1914–1918 (in progress), Sydney. 1921.

Dunbabin, T. The making of Australasia: a brief history of the origin and development of the British dominions in the South Pacific. London, 1922.

Jose, A. W. A history of Australia from the earliest times to the present day. 10th edition, Sydney, 1924.

Jose, A. W. Builders and Pioneers of Australia. Sydney, 1928.

Murdoch, W. Making of Australia: an introductory history. Melbourne, 1917.

Scott, E. Short history of Australia. 5th Edition. Oxford, 1928.

Suttor, H. M. Australian milestones and stories of the past, 1770–1914. 2 vols. Sydney, 1925.

Watson, J. F. Brief history of Canberra. Canberra, 1927.

Watson, J. F., *editor*. Historical records of Australia (in progress). Sydney, 1914.

CONSTITUTION AND ADMINISTRATION.

Kerr, D. The law of the Australian constitution. Sydney, 1925.

Moore, *Sir* W. H. The constitution of the Commonwealth of Australia. 2nd edition. Melbourne, 1910.

Quick, *Sir* J., *and* Garran, *Sir* R. R. The annotated constitution of the Australian Commonwealth 2nd edition. Sydney, 1901.

Quick, *Sir* J., *and* Groom, *Sir* L. E. The judicial power of the Commonwealth: with the practice and procedure of the High Court. Melbourne, 1904.

Quick, *Sir* J. The legislative powers of the Commonwealth and the States of Australia. Melbourne. 1919.

Sweetman, E. Australian constitutional development. Melbourne, 1925.

Wise, B. R. The making of the Australian Commonwealth, 1889–1900. London, 1913.

POLITICS.

Apsley, *Lord and Lady*. Amateur settlers. London, 1926.

British Immigration League of Australia. Annual reports.

Brown, J. M. Peoples and problems of the Pacific. 2 vols. London, 1927.

Childe, V. G. How labour governs. London, 1923.

Etherton, P. T., *Colonel, and* Tiltman, H. H. The Pacific: a forecast. London, 1928.

Fletcher, C. B. Problems of the Pacific. London, 1919.

Lyng, J. S. Non-Britishers in Australia: influence on population and progress. Melbourne, 1927.

Murdoch, W. Alfred Deakin: a sketch. London, 1923.

Reid, *Sir* G. H. My reminiscences. London, 1917.

Roberts, S. H. History of Australian land settlement (1788–1920). Melbourne, 1924.

Spence, W. G. Australia's awakening: thirty years in the life of an Australian agitator. Sydney, 1909.

Turner, H. G. First decade of the Australian Commonwealth: a chronicle of contemporary politics, 1901–1910. Melbourne, 1911.

Willard, M. History of the White Australia policy. Melbourne, 1923.

Young, D. H. A white Australia: is it possible? the problem of the empty North. Melbourne, 1922.

INDUSTRIES AND RESOURCES.

Australia's Leading Industries Pty. Ltd. Australia's leading industries. Melbourne, 1925.

Burfitt, C. T. History of the founding of the Wool industries of Australia. Sydney, 1907.

Collier, J. Pastoral age in Australasia. London, 1911.

Federation of British Industries. Resources of the Empire. London, 1924.

Harding, R. Cotton in Australia: the possibilities and limitations of Australia as a cotton-growing country. London, 1924.

Hawkesworth, A. Australasian sheep and wool. Sydney, 1920.

Hutchins, *Sir* D. E. Discussion of Australian forestry. Perth, 1916.

Morgan, B. H. The trade and industry of Australasia. London, 1908.

Pittman, E. F. Mineral resources of New South Wales. Sydney, 1901.

Taylor, T. G. Australia in its physiographic and economic aspects. 5th Edition. Oxford, 1928.

INDUSTRIAL CONDITIONS.

Coghlan, *Sir* T. H. Labour and industry in Australia: from the first settlement in 1788 to the establishment of the Commonwealth in 1901. Oxford, 1918.

Higgins, H. B. A new province for law and order: being a review by its late president for fourteen years of the Australian Court of Conciliation and Arbitration. Sydney, 1922.

Murphy, H. M. Wages and prices in Australia: our labour laws and their effect: also a report on how to prevent strikes. Melbourne, 1917.

Spence, W. G. History of the A.W.U. Sydney, 1911.

Sutcliffe, J. T. History of trade unionism in Australia. Melbourne, 1921.

ECONOMIC CONDITIONS.

ATKINSON, M., *editor*. Australia: economic and political studies. Melbourne, 1920.

BENHAM, F. C. Prosperity of Australia. London, 1928.

COPLAND, D. B. Monetary policy and its application to Australia. Melbourne, 1926.

ECONOMIC RECORD. The journal of the Economic Society of Australia and New Zealand. Melbourne, 1925 to date.

GIFFORD, J. L. K. Economic statistics for Australian Arbitration Courts. Melbourne, 1928.

GREAT BRITAIN. *Department of Overseas Trade*. Report on the economic and commercial situation of Australia. London, to date.

HEATON, H. Modern economic history: with special reference to Australia. Revised edition, Adelaide, 1925.

MAULDON, F. R. E. A Study in Social Economics—The Hunter River Valley. Melbourne, 1927.

MILLS, R. C., *and* BENHAM, F. C. Lectures on the principles of money, banking, and foreign exchange, and their application to Australia. 2nd edition. Sydney, 1925.

MILLS, S. Taxation in Australia. London, 1925.

SUTCLIFFE, J. T. The National Dividend. Melbourne, 1926.

SCIENCE.

LE SOUEF, A. S., *and* BURRELL, H. Wild Animals of Australasia. London, 1926.

LUCAS, A. H. S., *and* LE SOUEF, W. H. D. Birds of Australia. Melbourne, 1911.

MAIDEN, J. H. Useful native plants of Australia, including Tasmania. Sydney, 1889.

SPENCER, *Sir* W. B. The native tribes of the Northern Territory of Australia. London, 1914.

SPENCER, *Sir* W. B., *and* GILLEN, F. J. Across Australia. 2 vols. London, 1912. The Arunta 2 vols. London, 1927. Native tribes of Central Australia. London, 1899. Northern tribes of Central Australia. London, 1904.

TAYLOR, T. G. Geography of Australasia. 4th edition, revised. Oxford, 1920.

EDUCATIONAL AND SOCIAL CONDITIONS.

BROWNE, G. S., *editor*. Education in Australia: a comparative study of the educational systems of the six Australian states. London, 1927.

MURDOCH, W. Australian citizen. 1912.

NORTHCOTT, C. H. Australian Social development. New York, 1918.

SMITH, W. H. Brief history of education in Australia, 1788–1848. Sydney, 1917.

SWEETMAN, E., LONG, C. R., *and* SMITH, J. History of state education in Victoria. Melbourne, 1922.

THWING, C. F. Human Australasia: studies of society and of education in Australia and New Zealand. New York, 1923.

(*See also* Annual Reports of various State departments of Education.)

LITERATURE AND ART.

ART IN AUSTRALIA. A quarterly magazine. Sydney, 1916 to date.

MURDOCH, W., *editor*. A book of Australasian verse. 2nd edition. London, 1924.

PALMER, *Mrs.* J. G. Modern Australian literature (1900–1923). Melbourne, 1924.

SERLE, P., *compiler*. Bibliography of Australasian poetry and verse: Australia and New Zealand. Melbourne, 1925.

SERLE, P., *and others, compilers*. An Australasian anthology (Australian and New Zealand poems) London, 1927.

STEVENS, B., *editor*. Golden treasury of Australian verse. New edition. London, 1913.

TURNER, H. G., *and* SUTHERLAND, A. Development of Australian literature. London, 1898.

RELIGION.

BIRT, H. N. Benedictine pioneers in Australia. London, 1911.

CAMERON, *Rev.* J. Centenary history of the Presbyterian Church in New South Wales. 2 vols. Sydney, 1905.

CARRUTHERS, *Rev.* J. S. Memoirs of an Australian ministry, 1865–1921. [Methodist minister.] London, 1922.

CLARKE, HENRY LOWTHER, *Bishop*. Constitutional Church Government in the Dominions. London, 1924.

KIEK, *Rev.* E. S. An apostle in Australia: the life and reminiscences of Joseph Coles Kirby, pioneer and social reformer. [Congregational minister.] London, 1927.

O'BRIEN, *Rev.* E. M. Dawn of Catholicism in Australia. 2 vols. Sydney, 1928.

APPENDIX.

[Recent information and returns which have come to hand since the various chapters were sent to press are given hereunder.]

CHAPTER III.

GENERAL GOVERNMENT.

§ 2. Parliaments and Elections.

3. Federal Elections, p. 66.—The ninth Parliament was dissolved on 9th October, 1928, and the elections for the tenth Parliament were held on 17th November, 1928.

4. Federal Referenda, p. 67.—A referendum on the "Financial Agreement" was submitted to the electors on 17th November, 1928. For further details see Appendix, Chapter VIII., Finance, p. 1021.

§ 3. Administration and Legislation.

2. Governors-General and Ministries.—(*c*) Bruce-Page Government, p. 72.

After the elections held on 17th November, 1928, the Bruce-Page Government was re-organized and on 11th December, 1928, the composition of the Commonwealth Ministry was as shown in the following statement:—

Prime Minister and Minister for External Affairs ..	RT. HON. S. M. BRUCE, C.H., P.C., M.C.
Treasurer	HON. E. C. G. PAGE.
Vice-President of the Executive Council	RT. HON. SIR G. F. PEARCE, P.C., K.C.V.O.
Attorney-General and Minister for Industry	HON. J. G. LATHAM, C.M.G., K.C.
Postmaster-General and Minister for Works and Railways	HON. W. G. GIBSON.
Minister for Health and Minister in charge of Repatriation	MAJOR-GENERAL THE HON. SIR N. R. HOWSE, V.C., K.C.B., K.C.M.G.
Minister for Defence	MAJOR-GENERAL THE HON. SIR T. W. GLASGOW, K.C.B., C.M.G., D.S.O., V.D.
Minister for Markets	HON. T. PATERSON.
Minister for Trade and Customs	HON. H. S. GULLETT.
Minister for Home Affairs	HON. C. L. A. ABBOTT.
Assistant Ministers	MAJOR THE HON. C. W. C. MARR, D.S.O., M.C., V.D. HON. A. J. MCLACHLAN. HON. J. E. OGDEN.

3. State Ministries.—Victoria, p. 73.—The following is the composition of the Victorian Ministry from 21st November, 1928:—

Premier and Treasurer	HON. SIR W. MCPHERSON, K.B.E.
Chief Secretary and Minister for Health	HON. S. S. ARGYLE.
Attorney-General and Solicitor-General	HON. I. MACFARLAN.
Minister for Lands and Water Supply	HON. H. ANGUS.
Minister for Agriculture, Markets, and Immigration ..	HON. J. W. PENNINGTON, O.B.E.
Minister for Railways, Electric Supply, and Labour ..	HON. F. GROVES.
Minister for Public Works and Mines	HON. A. E. CHANDLER, M.L.C.
Minister for Education	HON. H. I. COHEN, K.C., M.L.C.
Honorary Ministers	HON. R. M. CUTHBERTSON. HON. E. MORLEY. HON. R. G. MENZIES, M.L.C. HON. M. SALTAU, M.L.C.

CHAPTER VI.

OVERSEA TRADE.

§ 4. Oversea Trade.

1. Total Oversea Trade, p. 202.—The following particulars have been compiled from preliminary returns relating to the Oversea Trade of Australia during the year 1927–28 :—

OVERSEA TRADE.—AUSTRALIA.

Period.	Recorded Value.			Value per Inhabitant.			Percentage of Exports on Imports.
	Imports.	Exports.	Total.	Imports.	Exports.	Total.	
	£1,000.	£1,000.	£1,000.	£ s. d.	£ s. d.	£ s. d.	%
1927–28	148,117	143,213	291,330	23 15 2	22 19 5	46 14 7	96.7

2. Ratio between Exports and Imports, p. 204.

BALANCE OF AUSTRALIAN TRADE FROM 1st JULY, 1914, TO 30th JUNE, 1928.

Year.	Recorded Excess of Exports.	Increase in Public Debt (Commonwealth and State) Raised Abroad.	B.A.W.R.A. Dividends.	Total of Columns (2), (3), and (4).	Approximate Annual Obligations Abroad for Interest and Services.	Addition to Funds Available Abroad for Transmission to Australia.	
						For the Year.	Accumulated from 1st July, 1914.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	£1,000,000	£1,000,000	£1,000,000	£1,000,000	£1,000,000	£1,000,000	£1,000,000
1914–15 ..	— 3.8	5.1	..	1.3	16.0	—14.7	—14.7
1915–16 ..	— 3.0	4.3	..	1.3	17.2	—15.9	—30.6
1916–17 ..	21.7	18.6	..	40.3	18.4	21.9	— 8.7
1917–18 ..	19.1	20.9	..	40.0	22.0	18.0	9.3
1918–19 ..	11.6	0.5	..	12.1	22.2	—10.1	— 0.8
1919–20 ..	50.8	10.8	..	61.6	23.2	38.4	37.6
1920–21 ..	—31.6	11.3	7.7	—12.6	24.3	—36.9	0.7
1921–22 ..	24.8	42.2	9.9	76.9	26.7	50.2	50.9
1922–23 ..	—13.9	3.9	5.9	— 4.1	26.8	—30.9	20.0
1923–24 ..	—21.1	48.1	5.3	32.3	28.5	3.8	23.8
1924–25 ..	4.9	0.1	..	5.0	29.5	—24.5	— 0.7
1925–26 ..	— 2.9	37.5	..	34.6	32.0	2.6	1.9
1926–27 ..	—19.6	11.8	..	— 7.8	33.2	—41.0	—39.1
1927–28 .. (preliminary)	— 4.9	54.3	3.9	53.3	35.0	18.3	—20.8
Total ..	32.1	269.4	32.7	334.2	355.0	..	—20.8

§ 10. Exports according to Industries.

4. Australian Production and Exports according to Industry, p. 229.—The heading "£1,000" should be added to columns relating to the Value of Production during Ten Years and Value of Exports during Ten Years.

CHAPTER VII.

TRANSPORT AND COMMUNICATION.

E. MOTOR VEHICLES.

5. **Motor Vehicles Registered, p. 310.**—Motor Vehicles registered at 30th June, 1928, were as follows:—

MOTOR VEHICLES REGISTERED AT 30th JUNE, 1928.

State or Territory.	Motor Cars.	Commercial Vehicles.	Motor Cycles.	All Vehicles.	
				No.	Per 1,000 of Population.
New South Wales	141,329	37,197	29,038	207,564	86
Victoria	126,120	(c) 208	24,015	150,343	86
Queensland	(a) 65,444	(b) 2,457	8,088	75,989	83
South Australia.. ..	51,753	11,517	12,741	76,011	132
Western Australia ..	23,644	8,665	6,071	38,380	96
Tasmania	9,730	1,559	3,887	15,176	72
Northern and Central Australia	195	170	42	407	96
Federal Capital Territory	916	233	135	1,284	160
Australia	419,131	62,006	84,017	565,154	90

(a) Pneumatic tyred vehicles. (b) Solid tyred vehicles. (c) Motor buses only - trucks, vans, &c., included with motor cars.

CHAPTER VIII.

FINANCE.

A. COMMONWEALTH FINANCE.

§ 2. Consolidated Revenue Fund.

Division II.—Revenue.

1. **Total, p. 342.**—Revenue for year 1927–28 amounted to £76,670,222.

2. **Revenue per Head, p. 342.**—The revenue per head of population for 1927–28 was £12 5s. 11d.

Division III.—Expenditure.

2. **Total Expenditure, p. 348.**—For the year 1927–28 the total expenditure was £82,120,459, and the expenditure per head of population £13 3s. 5d.

§ 4. Commonwealth Loan Funds and Public Debt.

7. **Commonwealth Public Debt.**—(ii) *Place of Flotation*, p. 359. At the 30th June, 1928, the debt stood as follows:—

	£
Payable in London	172,497,984
Payable in New York	33,563,752
Payable in Australia	277,031,917
Value of Transferred Properties	11,035,447
Total	494,129,100

(iv) *Amount of Interest Payable*, p. 360. At the 30th June, 1928, the annual interest payable on the debt amounted to £25,979,561, of which £8,674,152 was payable in London, £1,626,815 in New York, and £15,678,594 in Australia.

B. STATE FINANCE.

§ 1. General.

3. **Inter-relation of Commonwealth and State Finance, p. 371.**—At a referendum of Commonwealth electors taken on 17th November, 1928, the question of validating the proposals included in the "Financial Agreement" between the Commonwealth and the several States Governments was agreed to, the votes cast being as follows :—

Yes (in favour of the proposed agreement) ..	2,236,680
No (not in favour of the proposed agreement) ..	773,698
Informal	213,886
Total votes cast	3,224,264
Percentage of electors who voted	93.25%

The foregoing figures are incomplete in that some small returns in the State of Queensland have not yet been received.

CHAPTER XIII.

LABOUR, WAGES, AND PRICES.

C. EMPLOYMENT.

§ 4. Recent Legislation, p. 576.

Transport Workers Act (No. 37 of 1928). The Transport Workers Act 1928 provides for the regulation of the engagement, service and discharge of transport workers : the licensing of persons as transport workers ; the regulation and prohibition of employment of unlicensed persons ; and for the protection of transport workers.

CHAPTER XVII.

AGRICULTURAL PRODUCTION.

§ 4. Wheat.

7. **Voluntary Wheat Pools, p. 678.**—(i) *General.* Voluntary wheat pools again operated in the States of New South Wales, Victoria, South Australia, and Western Australia during the 1927–28 season. The system adopted in these States is somewhat similar, and is a co-operative one controlled by trustees, or committees appointed by the growers, the whole of the proceeds, less administrative expenses, being distributed amongst contributors of wheat to the pool. The trading names of these organizations in the various States are as follows :—

New South Wales.—The Wheat-growers' Pooling and Marketing Co. Ltd.
Victoria.—Victorian Wheat-growers' Corporation Ltd.
South Australia.—South Australian Co-operative Wheat Pools Ltd.
Western Australia.—The Co-operative Wheat Pool of Western Australia.

The marketing of wheat in Queensland was conducted on the compulsory basis by the State Wheat Board, consisting of five representatives of the growers with a Government appointee as Chairman.

(ii) *Delivery of Wheat to Pools.* The quantities of wheat received by the different pools, together with the percentage thereof on the total marketable wheat during 1927–28, were as follows :—

WHEAT RECEIVED BY VOLUNTARY POOLS, 1927–28.

Particulars.	Unit.	N.S.W.	Victoria.	S. Aust.	W. Aust.
Wheat received	Bushel	1,042,123	2,762,745	5,075,571	17,267,000
Percentage on Total Marketable Wheat	%	5	12	25	53

(iii) *Finance.* The requisite financial accommodation in New South Wales and Victoria was furnished by the Commonwealth and Associated Banks. In Western Australia funds were made available by the Co-operative Wholesale Society Ltd. of Great Britain. Initial advances were made available to growers on the delivery of their wheat at country stations, and further advances have been made in all the States, the payments to October, 1928, being as follows :—

WHEAT POOLS ADVANCES(*a*) PER BUSHEL MADE TO OCTOBER, 1928.

Particulars.	New South Wales.	Victoria.	South Australia.	Western Australia.
	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*	£ *s.* *d.*
1st Payment	0 3 6	0 3 8	0 3 8	0 3 6
2nd Payment	0 1 0	0 1 0	0 1 0	0 0 9
3rd Payment	0 0 6	..	0 0 4	0 0 3
4th Payment	..	..	..	0 0 7½
Estimated Final Payment ..	0 0 3	(*b*)	0 0 2	0 0 1

(*a*) Less Rail Freight. (*b*) Not available.

In Queensland the Commonwealth Bank provides the financial assistance necessary to make advances on wheat delivered, the State Government guaranteeing the Wheat Board's accounts with the bank.

All wheat not required for consumption on the farm is delivered to the Board, which is the sole marketing agency. The crop in 1927-28 was a good one, amounting to 3¾ million bushels. Marketing operations were favourable and it is expected that a net payment of 5s., or perhaps slightly more, per bushel will be paid on pool wheat of good quality. Advances made to 30th June, 1928, amounted to 4s. 8½d. per bushel on f.a.q. wheat, and 3s. 6½d. per bushel on inferior grades, the relative percentages being, milling wheat 86.2 per cent., and feed wheat 13.8 per cent.

CHAPTER XXI.

MINERAL INDUSTRY.

§ 1. The Mineral Wealth of Australia.

3. Value of Production during 1927, p. 751.—The following table gives the value of Australian mineral production for the year 1927 :—

MINERAL PRODUCTION.—VALUE, 1927.

Mineral.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Ter.	Total.
	£	£	£	£	£	£	£	£
Gold ..	76,595	163,699	161,321	1,776	1,734,568	20,646	468	2,159,073
Silver and Lead	3,487,980	304	32,102	143	30,421	222,427	379	3,773,756
Copper ..	12,655	..	218,842	12,452	101	362,988	..	607,038
Iron ..	657,346	..	506	830,789	..	..	..	1,488,641
Tin ..	287,539	11,454	193,774	..	13,316	317,593	18,754	842,430
Zinc ..	996,877	..	..	..	..	181,242	..	1,178,119
Coal ..	9,782,002	982,533	987,465	..	407,967	99,802	..	12,259,769
Other ..	150,138	18,388	51,101	343,362	6,427	204,654	2,115	776,185
Total ..	15,451,132	1,176,378	1,645,111	1,188,522	2,192,800	1,409,352	21,716	23,085,011

CHAPTER XXIV.

POPULATION.

§ 3. Distribution and Fluctuation of Population.

1. Present Number, p. 881.—The estimated population at the 30th June, 1928, was 6,284,407, distributed as follows :—

AUSTRALIA.—ESTIMATED POPULATION, 30th JUNE, 1928.

States and Territories.	Males.	Females.	Persons.
New South Wales	1,235,835	1,187,217	2,423,052
Victoria	869,390	880,049	1,749,439
Queensland	482,862	428,875	911,737
South Australia	299,104	278,652	577,756
Western Australia	216,589	183,111	399,700
Tasmania	104,588	105,878	210,466
Northern Territory	2,973	1,273	4,246
Federal Capital Territory	4,516	3,495	8,011
Total, Australia	3,215,857	3,068,550	6,284,407

The corresponding figures for Australia for the year ended 30th June, 1927, were 3,154,121 males and 3,013,308 females, or a total of 6,167,429. There was thus a total increase during the year ended 30th June, 1928, of 116,978, made up of 61,736 males and 55,242 females.

GENERAL INDEX.

[NOTE.—This index is followed by a list of maps, graphs, and diagrams, also a list of special articles, etc., in previous issues of the Official Year Book.]

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